May26'48

UNIVERSITY OF MINNESOTA RECEIVED MAY 26 1948 LIBRARY

Virginia MEDICAL MONTHLY

OFFICIAL PUBLICATION OF THE MEDICAL SOCIETY OF VIRGINIA

CONTENTS

Guest Editorial. Donald H. Kariher, M.D. 347

Disfigurements of the Face. William Lawrence Gatewood, M.D., New York, N. Y. 351

Some Precautions in the Administration of Sulfa Drugs. H. H. Howze, M.D., Norton, Va. 356

The Importance of Cerebrospinal Fluid Examination in Syphilis. Lewis W. McIlhany, M.D., and J. N. Dudley, M.D., Newport News, Va. 360

Pulmonary Actinomycosis Due to Actinomyces Asteroides. Frederick W. Shaw, M.D., Rebecca A. Holt, M.A., and Edward S. Ray, M.D., Richmond, Va. 362

Use of Defibrinated Human Blood for Culturing the Tubercle Bacillus. A. W. Bengtson, Catawba Sanatorium, Va. ... 369

Surgical Lesions of the Greater Omentum. E. M. Fusco, M.D., Grundy, Va. 371

Continued on page 4.

Annual Meeting
Medical Society of Virginia
Virginia Beach—October 14, 15, 16

August 1946

XUM

YOUR HELP
PARKE-DAVIS
THEELIN
IN OIL
EACH 1 CC. CONTAINS:
1 mg.
10,000 INTER. UNITS
A solution of the crystalline estrogenic substance, hexahydroxy estrabirlene in peanut oil.
PARKE DAVIS & CO
PARKE, DAVIS & COMPANY
DETROIT 32 • MICHIGAN

Virginia Medical Monthly

Vol. 73, No. 8.
WHOLE No. 1130.

RICHMOND, VA., AUGUST, 1946

$2.00 A YEAR
25 CENTS A COPY

GUEST EDITORIAL

The Rh Factor
Is It Important?

JUST how important is the Rh factor? This is a question that is in the minds of many practitioners of medicine, as well as of many laymen. Since the discovery of the Rh factor in 1940 there has been an ever increasing flood of scientific and pseudo-scientific articles in the medical journals of the world. Because of its tremendous appeal it has been emphasized in many lay journals. Because of this vast amount of literature on the subject, some of it arguing one point, some another, there are many physicians who have not had the opportunity to fully evaluate the pertinent facts known today concerning the Rh factor. As a result many needed transfusions have not been given since the physician feared an Rh transfusion reaction. Many mothers have gone through their pregnancies with great fear because of the dread of giving birth to a baby with hemolytic disease of the newborn.

It is not proposed in this article to answer fully the question of just how important the Rh factor is. That, probably, cannot be done today. However, in the short period of time since the Rh factor was discovered, some very definite and important information has been learned. From this information we can make certain statements which when viewed in their true perspective will point out the importance of the Rh factor in a few conditions.

For example, the Rh factor has been claimed to be the responsible agent in the production of toxemias of pregnancy, accidental hemorrhages of pregnancy, the occasional abortion in an otherwise parous woman, and the death in utero of thousands of stillborn infants. As a matter of fact we know today that the Rh factor is as remote as a causative agent in these conditions as it is in the production of lobar pneumonia.

There are two conditions, however, in which the Rh factor is of prime importance. One of these is the production of certain transfusion reactions, and the other is the production of erythroblastosis fetalis, or as it is more commonly called today, hemolytic disease of the newborn.

In certain individuals a transfusion reaction will result, which may or may not be fatal, if there is an incompatibility between the Rh factor of the donor and that of the recipient. In order for this to occur, the recipient must be one of the 13 per cent of the white population that is Rh negative, and the donor must be one of the 87 per cent of the white population that is Rh positive (in negroes, somewhat under 7 per cent are Rh negative). If the Rh negative recipient is a male, he may be given several transfusions of the Rh positive blood before he will have a reaction, since he must

be repeatedly sensitized to the Rh factor by multiple transfusions of the Rh positive blood, before he will develop enough Rh antibody to hemolyze the Rh positive cells in a subsequent transfusion. If the recipeint is a female however, this may not be so, if she has given birth to several children who are Rh positive, and will not be so if she has delivered an infant with hemolytic disease of the newborn, because she has been repeatedly sensitized by her Rh positive pregnancies. This recipient then may have a fatal transfusion reaction from the first transfusion she receives, rather than after several transfusions as in the male recipient. The importance of this point is obvious. If an Rh negative mother who has Rh antibody in her serum as a result of being sensitized by her Rh positive fetus, should have some obstetrical condition requiring immediate transfusion, that mother could die as a result of the transfusion if she were given Rh positive blood. She would be tabulated as an obstetrical death, whereas in reality she is a transfusion reaction death.

Just as hemolytic disease in the newborn can cause a transfusion reaction in the mother, so transfusions in the mother can cause hemolytic disease in the newborn. The mechanism in the latter is identical with that described for the production of the transfusion reactions save that now the Rh negative mother has been previously sensitized to the Rh factor by having received Rh positive blood at some earlier time in her life. If that individual should then marry an Rh positive man, and she became pregnant with an Rh positive fetus, the red cells of that fetus could be hemolyzed in utero to such an extent that the infant would be born with one of the types of hemolytic disease of the newborn (congenital anemia, icterus gravis or congenital hydrops). It is not necessary that the patient be given Rh positive blood intravenously for this to happen. Cases are on record where mothers were given intramuscular blood during their childhood for prophylaxis against measles, and those same mothers later terminated their first pregnancies with infants suffering from hemolytic disease of the newborn.

That type of case is not common. The usual history in cases where an infant with hemolytic disease is born is that the first one or two pregnancies are normal, and then the subsequent pregnancy resulted in the diseased infant. In these cases the mother is Rh negative and her husband is Rh positive. Since the Rh factor is transmitted as a dominant characteristic the infants from such a mating are usually Rh positive. This mother then has been sensitized to the Rh factor by her previous pregnancies of Rh positive fetuses, and after sufficient sensitization has taken place (usually following one or two pregnancies) the red cells of the next Rh positive fetus are hemolyzed to such a degree that normal erythropoetic activity is not possible, and the infant suffers from hemolytic disease of the newborn. There have been a few cases reported where the mother has had as many as seven normal Rh positive children before the eighth child was born with hemolytic disease.

It would appear from the foregoing that the Rh factor reaches its peak of importance in the pregnant and or parous Rh negative woman. If we are to handle these patients properly it is essential that we know the Rh status of the patient, and also of her husband. Whether the patient has had previous transfusions should be ascertained, and a complete obstetrical history is helpful. During the course of the patient's pregnancy an effort should be made to test her serum at suitable intervals for the development of Rh antibody.

At Rochester, New York, a plan for finding out the above facts has been put into use. It is a cooperative plan between the Rochester Health Bureau and the De-

partment of Obstetrics and Gynecology of the University of Rochester Medical School, and is essentially a plan of doing routine ante-natal Rh and anti-Rh determinations on every pregnant woman. It is carried out briefly, as follows: Every blood sample that is submitted to the Health Bureau in a routine manner for a prenatal Wassermann test, is also tested for the Rh factor. The result of this test is reported to the physician along with the Wassermann report. If the patient is Rh positive nothing further is done except in individual cases. If the patient is Rh negative, however, a form is sent the physician which requests him to obtain a sample of the husband's blood for Rh determination. If the husband is Rh negative nothing further is done. If he is Rh positive, the physician submits a brief obstetrical history of the patient along with a statement as to whether the patient has ever been transfused, and if so whether she had a reaction to one or more of the transfusions. In addition the physician submits samples of the patient's blood at monthly intervals during the first seven months of the pregnancy, every two weeks during the eighth month and every week during the last month. These samples are tested for the development of the Rh antibody, and if it appears during the pregnancy, its titer is determined in each subsequent blood sample to detect a rise or fall in its level.

At the end of the first eight months of operation of this plan several interesting data were obtained. Some of these are recorded in the following table:

Total Deliveries City of Rochester	4,717	
Prenatal Rh Tests	5,567	
Rh negative tests	690	
Positive Tests for Rh Antibodies	20*	1 Case in q. 34 Rh—mothers 1 Case in q. 278 tests.
Infants born with Hemolytic Disease of Newborn	9*	1 Case in 524 Deliveries.
Mortality from Hemolytic Disease of Newborn	6	1 Case in 786 Deliveries.

(All figures are for period from 10/1/45 to 5/1/46.)

Perhaps the most interesting single figure in the table is that which records that only one out of every 34 Rh negative mothers who are married to Rh positive husbands develops Rh antibodies and in turn subsequently delivers an infant with hemolytic disease of the newborn. This should be a very encouraging figure for those Rh negative women who because of widespread lay publicity or of well-intentioned friends are extremely fearful of becoming pregnant or of continuing a pregnancy once it has been unintentionally initiated. These women should also be reminded that it is unusual for the first or second pregnancy to result in an infant with hemolytic disease of the newborn.

The other two figures which are of interest record the frequency of hemolytic disease of the newborn, one case in every 524 fullterm or nearly fullterm deliveries and the mortality rate from hemolytic disease, one case in every 786 fullterm or nearly fullterm deliveries. To the physician doing an average amount of obstetrics these figures indicate that many months or even years might elapse before he would deliver a baby suffering from hemolytic disease. However, from the Public Health viewpoint these figures are of significance. Potter[1] has calculated that in 1943 in the United States approximately 8,000 babies died of the disease. It has been found in Rochester that the disease stands fourth among the fetal causes of infantile mortality.

No one doubts the importance of doing routine ante-natal Wassermann tests.

*The discrepancy between these figures is due to the fact that only about half of the sensitized mothers had delivered at the time this table was composed.

XUM

In Rochester during the eight months referred to in the table there were 27 positive ante-natal Wassermanns and nearly as many (20) positive anti Rh tests. No infants were born with congenital syphilis, yet nine were born with hemolytic disease.

In this same study it was found that the single procedure of transfusing infants suffering from hemolytic disease with Rh negative blood would reduce the mortality rate by about 50 per cent. This figure is not as high as has been reported by others, but it serves to illustrate the value of using Rh negative rather than Rh positive blood in the treatment of these infants.

It is felt that routine testing of every pregnant woman for the Rh factor, and subsequently for the Rh antibodies if indicated, should be an established practice. This policy would have a two-fold result. It would in one instance assure the patient that she would deliver a normal infant, as far as hemolytic disease is concerned, and in the other instance it would inform the physician that a defective infant is to be expected and thus enable him to make preparations for the immediate transfusion of the infant at the time of birth with Rh negative blood.

DONALD H. KARIHER, M.D.

BIBLIOGRAPHY

1. Potter, E. L., Am. Jr. Pub. Health **36**:101, 1946.

EDITOR'S NOTE. Dr. Kariher is the Assistant Professor of Obstetrics and Gynecology, University of Rochester School of Medicine and Dentistry, Rochester, New York.

Floral Eponym (41)

ELSHOLTZIA

JOHANN SIGISMUND ELSHOLTZ, 1623-1688

Elsholtz (or Elsholz), physician, botanist and chemist, was born at Frankfurt-on-Oder. He received his M.D. at Padua. Elsholtz was physician to the Elector of Brandenburg and director of the botanical garden which had been created by that Prince. Later he became director of the botanical garden in Berlin. Besides several works on Botany, he was the author of "Anthropometria" or the proportions of the human body (Padua 1654) and a work on dietetics. He also published many secrets on the perfection of wine and directions for preparing vegetable essences. Willdenow gave the name Elsholtzia to a genus of plants in his honor.

Elsholtzia is a genus 20 species of chiefly Asiatic, aromatic under shrubs of the mint family. *E. stauntoni* is grown for its late blooming purple flowers.

DISFIGUREMENTS OF THE FACE

WILLIAM LAWRENCE GATEWOOD, M.D.,*
New York, N. Y.

Although plastic surgery dates back several thousand years, it was only during the first World War that it assumed the status of an accepted specialty. In the years which elapsed between World War I and the recent conflict, plastic and reconstructive surgery progressed with giant strides. Now that we are again experiencing the results of destructive warfare, attention once more centers on this important branch of medicine as a major determinant of effective rehabilitation. The wise and timely application of plastic repair may mean the difference between normal, happy living and a wide range of physical and psychological disorders. The mental reaction, particularly in the hyperesthetic subject, is frequently pronounced—with disturbance of the economic, emotional and social activities of those afflicted.

In dealing with exposed parts, especially the face, surgeons have striven for centuries to obtain a good functional result and, in more recent years, their attention has been given to the effort of including in the result an improvement in the patient's appearance.

Because it is intended that this discussion should include a number of facial disfigurements, it would not be within the scope of this paper to relate in detail a description of any one of them. It is felt that the concise report of cases might best serve to bring to the attention of the reader the importance of the subject.

FACIAL PARALYSIS

Asymmetry of the face, resulting from unilateral involvement of the muscles of the face, due to a seventh nerve paralysis, is strikingly disfiguring because of the mobility of the normal side. In comparison with the lifeless sagging of the paralytic cheek, every motion of the unaffected side is exaggerated into a grotesque grimace. A certain compensatory over-activity of the healthy muscles accentuates the contrast. The twisted mouth and the lagophthalmos are unsightly enough when the face is in repose. However, when every play of expression and every functional movement of the healthy features occur the disfigurement becomes decidedly more pronounced.

When the paralysis is seen in infancy or childhood, another factor enters in to magnify its consequences. Because of disuse, the affected muscles atrophy and the corresponding portion of the face fails to develop. This under-development, contrasted with the normal growth or over-development of the opposite side, noticeably increases the asymmetry.

The condition of the facial muscles should necessarily be a factor in the selection of the type of operative procedure required for the repair. Are these muscles capable of contraction or have they degenerated? In the patient where the paralysis has existed for many years and there is no galvanic response, it is reasonable to suppose that the facial muscles have degenerated. The lesion is an old one and surgical reconstruction, utilizing the temporal muscle and pericranium to lend support to the atrophied facial muscles on the affected side, should serve to lift the corner of the mouth and narrow the palpebral fissure. In making use of the temporal muscle and pericranium in the repair, the weakened muscles are given support on which to brace themselves. Direct nerve suture, grafting or neuro-anastomosis is the method of choice in suitable cases, namely, in those in which it is possible to demonstrate a galvanic response showing that the facial muscles are still contractile. Here every effort must be aimed at supplying the paralyzed, but still contractile, muscles with renewed nervous impulses.

In the case report herein presented, the muscles of the face on the affected side were in a state of atrophy. No response could be had to the galvanic test. It was not a suitable case for surgery of the nerve. Under the circumstances, it was felt that in the use of the method prescribed, while not entirely satisfactory, it would serve to improve the patient's appearance and benefit his morale. As a result of the procedure, the face was made almost symmetric in repose and certain voluntary movements resulted. However, in advising the operation, it was fully realized that the emotional movements would remain lost following any operative procedure and this was thoroughly explained to the patient. The operation resulted in the reinforcement of the muscles of

*Active consulting Plastic Surgeon, General Surgical Division, Gouverneur Hospital, Department of Hospitals, City of New York.

XUM

the left cheek, the lifting of the paralyzed corner of the mouth and correction of the lagophthalmos which had caused an irritated condition of the left eye. The result seemed to justify the operation though it was extensive and time consuming.

REPORT OF CASE

J. S., a white man, aged 25, has had good health all of his life, with the exception of an acute mastoid infection when two and a half years of age. Because he was deprived of surgical treatment, a degeneration of the facial nerve with subsequent paralysis of the left face resulted (Fig. 1a.). Due

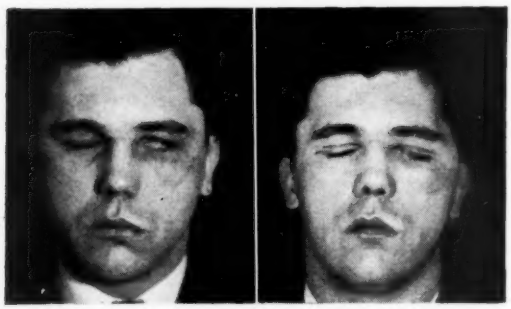

Figure 1.

a. Facial paralysis with lagophthalmos and atrophy of facial muscles, left side.

b. Post-operative result. Can now close left eye and there is some muscular reinforcement of left cheek. Note the semi-horseshoe shaped scar over left malar region in both views. This resulted many years ago from a horse-bite and will be excised at a later date.

to the disfigurement, the patient shunned strangers upon reaching the age of adolescence. Subsequently he suffered spells of mental depression when he would shut himself away from his family. He refused an education and accepted work in the kitchen of a poorly lighted restaurant where his contacts were few. His physician stated that he feared a true psychosis might develop unless some improvement in the patient's appearance could be had and urged that something be done in the way of plastic repair even though the condition could be only slightly benefited.

OPERATIVE PROCEDURE

This consisted of the use of a strip of pericranium, about 4 x 12 centimeters, which was suspended from the temporal region to the corner of the mouth and sutured to the orbicularis oris muscle and to the fascia overlying the atrophied muscles of the cheek. A small strip of the anterior fibers of the temporal muscle and temporal fascia was brought down and placed under the skin of the upper eyelid and made secure by suturing it to the periosteum of the inner and outer rims of the orbit. Deep mattress sutures of alloy steel wire No. 36 were placed in the fascia overlying the orbicularis oris and levator labii superioris muscles to draw up the relaxed tissues of the face. The redundant skin in the pre-auricular region was excised. The wound edges were approximated with fine silk and a snug dressing secured the parts in their new position (Fig. 1b).

COMMENT

Since the function of the facial nerve was long absent in this patient, and a surgical repair of that structure was not feasible, the procedure advocated and followed presents a justifiable choice in the effort to improve the symmetry of function. The desirability of surgical repair should be measured by the degree of improvement. Insignificant as it may be, it is better than a continuance of the tragic pre-operative condition.

THE MALFORMED EAR

The abnormally protruding ear is the bane of masculine vanity. Unlike most deformities, it provokes mirth rather than compassion. Fortunately, women can at times conceal the obtrusive appendage beneath their hair, while men must either seek surgical repair or go through life wincing at the friendly jests of their fellows. Slight protrusions of parts of the auricle can sometimes be corrected in infancy and early childhood by proper care in placing the child in its crib and carriage. The ear should be kept flat against the head. Where there is marked protrusion of the entire ear or partial prolapse sufficient to warrant plastic reconstruction, the deformity is not infrequently of an hereditary nature, and does not yield to such mild palliatives as caps and adhesive straps. In this type of deformity, the purpose of reparative surgery is to bring the ear closer to the skull and produce an auricle that conforms to the normal outline.

REPORT OF CASES

R. C., a white boy, aged 14, with marked prolapse of the upper three-fourths of the left auricle has been extremely conscious of the disfigurement for the past several years (Fig. 2a). According to

his mother he has undergone genuine mental anguish because of this conspicuous flaw in his appearance.

Figure 2.
a. Pre-operative partial prolapse of left ear. b. Demonstrates post-operative result.

SURGICAL RECONSTRUCTION

The necessary surgical repair consisted in the removal of a quantity of skin and cartilage through an incision concealed behind the ear. Normal outline of the auricle was obtained when the resistance of the remaining cartilage was reduced by the removal of certain portions of it. After modeling the ear into the desired shape, stay sutures of wire were employed to maintain the parts in their reassembled position until complete healing had taken place (Fig. 2b).

V. B., a girl of 17, with bilateral protrusion of the ears, was reported by her guardian not to have been greatly concerned about the disfigurement until the past two years (Fig. 3a). Because of the desire

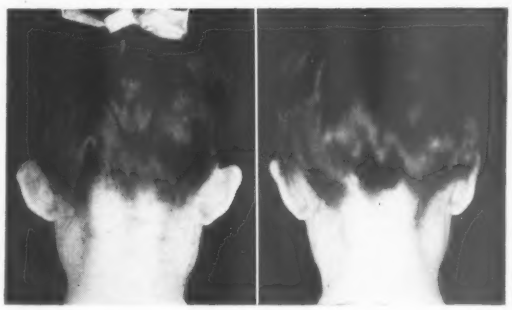

Figure 3.
a. Protrusion of ears, bilateral. b. Operative result.

to have a boyish haircut, prior to spending the summer at the beach, she earnestly requested an operation.

SURGICAL RECONSTRUCTION

Through an incision, about 1 inch in length, in the postauricular region, the skin with the perichondrium was elevated for a distance of about a half inch lateral to each side of the incision. Through this incision, strips of the cartilage were incised and some of them removed. In those that were not removed, incisions were made in them to reduce the resistance of the cartilage so that proper moulding could take place. Fine silk sutures in the perichondrium and skin closed the wound. A gauze dressing, confined with adhesive, completed the procedure (Fig. 3b).

RELAXATION OF MUSCLES OF FACE AND NECK WITH REDUNDANCY OF OVERLYING SKIN

This condition is occasionally seen in the third decade of life. It commonly occurs in the middle

Figure 4.
a. Relaxed tissues of face and neck. b. Demonstrates its correction.

aged and those in advanced years. Adequate appraisal of the social and economic status of the patient should materially assist the surgeon in establishing the necessity for the surgical correction of the condition.

CASE REPORT

K. K., a white woman, aged 44, with marked relaxation of the muscles and skin of the face and neck, was referred by her physician who stated that she had a definite complex because of the deep lines and folds in her face and neck and he recommended plastic repair for the condition (Fig. 4a).

OPERATION

Through an incision in the pre- and post-auricular regions, the skin overlying the cheek and neck was undermined. All bleeding points were controlled by ligation and the use of the electrosurgical unit. Mattress sutures of wire were placed in the

fascia and external muscle fibers for the purpose of lifting these structures. The redundant skin was excised and the wound edges were coapted with fine silk. A like procedure was carried out on the companion side. A firm dressing was applied (Fig. 4b).

COMMENT

The lifting of the muscles of the face and neck with excision of redundant overlying skin is becoming an economic necessity with business women who are having the operation done to enable them to keep their positions a few years longer. When the correction is executed with thoroughness of technique, the result remains satisfactory for many years.

RHINOPHYMA WITH BONY HYPERTROPHY

The usual treatment for rhinophyma or acne hypertrophica is the complete excision of the hypertrophied skin and underlying growth. In the case herewith presented (Fig. 5a), a different approach was used in that only a small quantity of skin wa excised.

PROCEDURE

Through an inverted T-shaped skin incision a the tip of the nose, the underlying diseased structures were removed, exposing the upper and lower lateral cartilages. The skin flaps were trimmed t conform to the cartilaginous outline and the wound edges were approximated with dermalon. The bony hypertrophy of the dorsum of the nose was reduced with a chisel and a lateral osteotomy was performed for the purpose of narrowing the nose (Fig. 5b).

COMMENT

Rhinophyma or acne hypertrophica is a disease of the skin of the nose which requires surgical treatment.

CONTRACTED SCAR OF LOWER EYELID, NOSE AND CHEEK (Fig. 6a)

The necessary repair consisted in excision of the scar tissue and application of a sheet of intermedi-

Figure 5.

a. Rhinophyma with bony hypertrophy and marked bulbous tip.

b. Post-operative view.

Figure 6.

a. Contracted scar of lower eyelid, nose and cheek.

b. Showing result after application of skin graft.

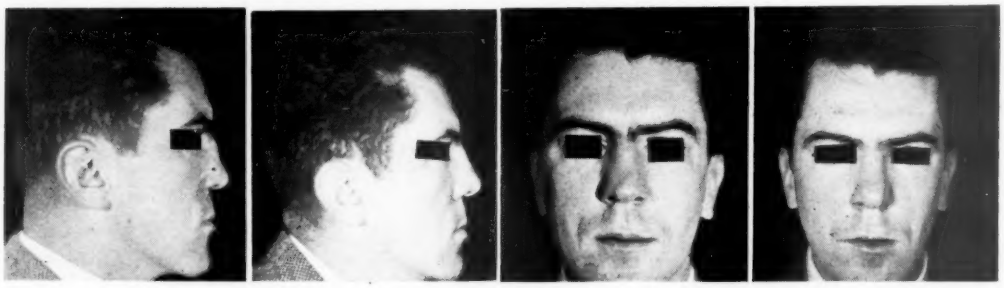

Figure 7.

a. Profile view before operation showing elongated and bulbous nose with depression in lower dorsum.

b. Profile view after operation. Note improvement of contour of lip at junction with columella by cartilage graft.

c. Full view, before operation. Bulbous tip with abnormally wide bridge.

d. Full view after operation. Nose narrowed and shortened with filling in of depression.

ate skin after the technique of Jenney's modification of the Sano procedure (Fig. 6b).

DISTORTIONS OF THE NOSE

The central position of the nose on the face, with its pronounced protrusion adds to the conspicuous-

Figure 8.
a. Over-sized deformity of nose. b. Post-operative view.

ness of any deformity associated with it. A gross nasal malformation is often a real source of concern to many who are so afflicted. To patients with a normal mentality and a rational conception of the extent of their disfigurement, the importance of having such a defect corrected is paramount.

Deformities of the nose comprise a high percentage of disfigurements of the face and they frequently require operations of an inherently individual nature for their correction. Each case will often present a new problem and must be dealt with accordingly (Figures 7 to 10 inclusive).

CONCLUSION

Today there is a definite realization of the psychic aberrations which interfere with the social usefulness of a number of people who have a congenital or acquired disfigurement of the face. A defect that is prominent enough to injure the social or economic future of an individual warrants surgical intervention. The many unfortunates who are frustrated in their search for happiness and security because of these disfigurements are entitled to the proper advice and surgical treatment provided their physical condition will justify it.

Figure 9.
a. Old fracture of nose with complete nasal obstruction. b. Pre-operative lateral view. c. Correction of deformity with relief of nasal obstruction. d. Profile post-operatively.

Figure 10.
a. Lateral view showing deep depression in cartilaginous dorsum of nose following operation of septum several years ago. b. Post-operative result.

BIBLIOGRAPHY

Coleman, Claude C.: Surgical Lesions of the Facial Nerve with Comments on Its Anatomy, *Archives of Surgery*, May, 1944, Vol. 119, No. V.

Jenney, John A.: A Modification of the Plasma Fixation Method (Sano) of Skin Grafting by the Use of Bobbinet and a Mirror Attachment, *American Journal of Surgery*, January, 1945.

Maliniac, J. W.: Sculpture in the Living, Romaine and Pierson, 1934.

Sheehan, J. Eastman: Tissue Grafting, *American Journal of Surgery*, September, 1943, Vol. LXI, 339-349.

Gatewood, W. L.: Correction of Multiple Deformities of Nose, *Virginia Medical Monthly*, Vol. 71, 227-231, May, 1944.

111 East 61st Street.

XUM

SOME PRECAUTIONS IN THE ADMINISTRATION OF SULFA DRUGS*

H. H. HOWZE, M.D.,
Norton, Virginia.

Without attempting to give the historical background of the sulfonamides and their therapeutic value, which is well established, because of a fairly good number of cases in which dangerous complications have been observed following the incorrect administration of these agents, it is felt advisable to review some of these complications and the methods of administration, to keep these complications at a minimal level.

Of course, in the susceptible individual, unfortunate reactions will occur regardless of the drug and/or the method of administration; these cases are comparatively few. It is customary to evaluate the good therapeutic results obtained in the administration of sulfonamides with very little thought of the dangers and complications of its administration. Such complications as agranulocytosis, hemolytic anemia and toxic hepatitis and hematuria with crystalluria are quite well known to the profession. With the now quite universal use of penicillin, relatively less use of the sulfonamides has followed, with consequent decrease in expected complications. However, it seems that many doctors with their busy practices are apt to overlook the fact that sulfonamides should never be administered without adequate doses of sodium bicarbonate, in such quantities as to render the urine alkaline in reaction. It is well known that when a sulfonamide is excreted by the kidney, if the urine is acid in reaction, a precipitation of crystals will occur. In the presence of an alkaline urine, these crystals are usually rapidly dissolved. Certainly, in the administration of the sulfonamides, frequent urinalyses to determine the presence or absence of crystals, and also a fairly frequent blood count and hemoglobin estimation should be done, if we are to treat conditions in which the sulfonamides are indicated.

A summary of a few interesting cases that I have seen in which sulfonamides have been improperly administered, with resulting complications, are listed:

From Department of Surgery and Pathology, Norton General Hospital, Norton, Va.

*Presented before Wise County Medical Society at Appalachia, Virginia, February 28, 1946.

(1) White male, age 45: Complaint: Severe pain in left lumbar and bladder regions, marked hematuria. He had been given sulfathiazole, four grams daily, for about thirty days, without any alkali, and had not taken much water because of nausea. Gross masses of crystals were present in the urine. Cystoscopic examination showed multiple lacerations in the bladder mucosa. Patient was referred to urologist, and it was found necessary to remove the left kidney and ureter, and patient was given several blood transfusions before recovery.

(2) Baby, female, 5 months: Given sulfathiazole without soda for five days for pneumonia; when admitted to the hospital, a marked anemia, with one million red blood cells, hemoglobin 30 per cent, white blood cells, 3,200, was found. Blood transfusions, elixir cofron, etc., were given, but patient did not react and death followed three days later. In this case, death might have been prevented if it had been possible to have done a blood count and stopped the drug earlier.

(3) White male, age 25: Complaint: Bloody urine. He had been taking two sulfathiazole tablets bought at a drug store, without soda, every four hours for five days, and stated that he was told to drink little water. Prompt recovery following intravenous fluids and alkalies.

(4) White male, age 22: Complaint: Gonorrhea. Had had sulfathiazole, one gram doses every four hours without alkali for four days; pains in upper back and bloody urine, which showed RBC 3 plus, and sulfonamide crystals, 2 plus; hematuria improved rapidly after administration of sodium bicarbonate and ingestion of large amounts of water. He was given penicillin in oil for gonorrhea, which did not recur.

(5) White male, age 47: Acute hemolytic anemia, with toxic hepatitis, caused by sulfadiazine. Admitted to hospital with diagnosis of pneumonia, lobar, left lower lobe. He received 2.5 grams sodium sulfadiazine intravenously every three hours for first day, followed by oral sulfadiazine, 1 gram every four hours, day and night, with 10 grams of sodium bicarbonate with each dose. The drug level in the blood was high, but temperature remained

101 F. On the fourth day, hemoglobin had dropped to 78 per cent, from 92 per cent on admission, and leucocyte count was 13,500. Drug was reduced to five grains every four hours and hemoglobin was 69 per cent, and leucocyte count 19,000 on 6th day. The next day, temperature was 102.5°, and definite icterus was present. Leucocyte count rose to 30,000. Blood sulfadiazine level remained at 7.5 mgms. On the 9th day, hemoglobin had dropped to 59 per cent; RBC 2,226,000, and leucocyte count 25,500. It was clear that a severe hemolytic anemia with toxic hepatitis had developed, preceded by a sharp rise in leucocytes. Five transfusions of citrated blood were given without reaction; high caloric diet, thiamine chloride and liver extract were begun. The course was stormy for several days, but improvement began in one week, and temperature became normal on 19th hospital day. The blood picture improved gradually, and patient was discharged on 36th day. A slight anemia remained, but icterus had cleared and liver edge was no longer palpable.

SYNERGIC ACTION OF PENICILLIN AND SULFONAMIDES

Clinical and experimental tests have demonstrated the synergic action of sulfonamides and penicillin. In a concentration of penicillin which is not inhibitory to staphylococcus, the addition of sulfathiazole renders it bactericidal. Therefore, in some severe types of infections, which do not respond to either sulfonamides or penicillin, a combination of the two may bring about prompt improvement. By this means, it is possible to use smaller doses of sulfonamides for a shorter time, thus lessening the danger of serious complications.

If, in the course of administration of a sulfonamide, agranulocytosis develops, it has been found that penicillin is the most effective agent in treatment.

White woman, age 19, had received sulfathiazole for severe vaginal discharge of post delivery. One week, post partum, phlebitis developed in right leg, and a few days later, left leg. Sulfathiazole was administered, four grams daily for three weeks; her temperature suddenly rose to 105°; sulfanilamide was substituted. Pronounced anemia, leucopenia and granulocytopenia were discovered. A transfusion of whole blood was given. Pelvic examination showed a foul smelling bloody discharge. Penicillin was administered for eight days, for a total of 800,000 units. The white count rose to 13,800, and many primitive granulocytes were found in the stained smear. The leucocyte count was 46,800 three days later, and eventually rose to 84,800. Primitive granulocytes were present in large numbers, and an occasional nucleated red cell was noted. Leucocyte count gradually declined and she showed continuous clinical improvement. Two weeks later the WBC was 10,400, and she was clinically well. In this case, the bone marrow reaction to sulfonamides was total, since there was anemia, leukopenia and thrombo-cytopenia.

Death from agranulocytosis is not due to lack of granulocytes *per se,* but to overwhelming sepsis, which results when granulocytes disappear. This is why penicillin is indicated and effective when this condition develops, during or following the administration of sulfonamides.

TOXIC MANIFESTATIONS

The subject of drug toxicity concerns all of the sulfonamides because of their close chemical relationship, and because they tend to follow a similar pattern in toxic effects. The longer the drugs are administered, the greater is the likelihood of encountering trouble, and therefore treatment of meningitis offers a greater hazard from this standpoint than do other less severe infections. The various effects of the sulfonamides are too familiar to all to warrant a systematic recital at this time, but there are some points of importance in connection with them which should be emphasized.

In the first place, practically all toxic effects can be detected by observation alone. Symptoms such as headache, nausea with vomiting, dizziness and anorexia are, of course, self-evident. Abnormalities of fluid balance may be noted easily and even bloody urine frequently may be detected by inspection of a gross specimen. Drug fever, rashes, anemia and jaundice all may be easily observed.

Leukopenia and granulocytopenia alone can be detected only by laboratory examination. They tend to occur most commonly with sulfapyridine and also with sulfanilamide, and may occur during or after the second week of treatment. Acute anemia may occur during the first few days of treatment. It occurs most commonly with sulfanilamide and also with sulfapyridine. Both of these conditions, as well as jaundice produced by the drug, are ordinarily indications for discontinuing sulfonamide treatment, but in meningitis, sulfonamides are usually essential rather than optional,

XUM

and, when a rash occurs, a change should be made to another sulfonamide, instead of discontinuing sulfonamide treatment. We have frequently seen rashes and fever from sulfathiazole rapidly disappear when administration of this drug was discontinued and replaced by sulfadiazine.

Renal complications form a real hazard with use of sulfonamides and occur most frequently with sulfathiazole and sulfapyridine, but may occur with sulfadiazine and sulfamerazine. As all of the drugs are practically entirely eliminated in the urine, maintenance of an intake of fluid of 3,000 cc. or more and output of at least 1,500 cc. following this procedure oliguria readily becomes evident, and the margin of safety is greater than if a low intake and excretion of fluid are maintained. If renal complications do occur, they can frequently be successfully combated by ureteral catheterization, if this is necessary.

A real contribution in reducing renal complications has been made by Gilligan and associates in demonstrating the increased solubility of sulfonamides in a neutral or slightly alkaline urine. Sulfadiazine is twenty times more soluble and acetylsulfadiazine thirty times more soluble with a pH of 7.5 than a pH of 5.0. At neutrality, or a pH of 7.0, sulfadiazine is seven times more soluble, and acetylsulfadiazine thirteen times more soluble than with a pH of 5.0-6.0. These figures indicate a reason for the occurrence of toxic renal complications, and also indicate the value of alkalization therapy. Clinical experience has demonstrated that adjuvant alkali therapy will markedly reduce the occurrence of renal complications when sulfadiazine is used. Gilligan and associates have suggested from their studies that it is necessary for satisfactory results to give an initial dose of 6 grams (90 grains) of soda bicarbonate, followed by 15.6 grams (234 grains) daily divided into 2.6 grams (39 grains) doses given at intervals of four hours. They have suggested that this amount of alkali be given to patients receiving as little as 3 to 4 grams (45 to 60 grains) of sulfadiazine daily. For patients receiving 12 to 15 grams (180 to 225 grains) of sulfadiazine daily, they suggested that 19.5 grams (292½ grains) of soda bicarbonate to be given daily in equally divided doses at intervals of four hours.

Actually, these doses of soda bicarbonate have produced no ill effects from alkalosis and in consideration of the high percentage of renal complications occurring, large amounts may be roughly checked by using litmus or nitrazine paper which turns blue in neutral or alkaline urine. Alkaline therapy is also of value, as Schwartz and his associates have shown, when sulfathiazole is used, but its value is not as great as when used with sulfadiazine. It is of no value when used with sulfapyridine, because of the poor solubility behavior of this drug and its acetyl derivative, but should prove to be of even greater value when used with sulfamerazine than when used with sulfadiazine. It also seems likely, as Loughlin and associates have noted, that adjuvant alkali treatment with sulfadiazine may cause the level of the drug to rise more rapidly in the blood.

How We Can Avoid the Renal Complications of Sulfadiazine Therapy

Six patients were in the Rhode Island Hospital at one time with various degrees of oliguria or anuria, during or following sulfadiazine therapy. Autopsy findings in the two patients who died of anuria showed the presence of tubular necrosis due to sulfadiazine, and one had massive precipitation of acetyl sulfadiazine in the renal tubules. The other four patients recovered after the drug was stopped and fluids were forced by the oral or intravenous routes.

Serious renal complications may be anticipated when sulfadiazine is administered to a patient with potentially reduced kidney function, if the drug is given without adequate precautions. First consideration is the age of the patient. As old age approaches, the kidney has little excretory parenchyma to spare, although its total function may still be perfect. The age of fifty has been arbitrarily chosen as a convenient point at which renal weakness, as regards sulfonamide therapy, may be said to begin; actually the individual patient must be studied for evidence of actual renal damage. The drug should be used with great care, if at all, in the presence of definite nephritis.

Sulfadiazine is absorbed and excreted more slowly than most other sulfonamides. It is detoxified in the body by acetylation, and the excretion, almost entirely by the kidney, is about 70 per cent free drug, and 30 per cent acetylate. After stopping the drug, it is excreted in 48 to 72 hours by a normal kidney; perhaps in many days by a damaged kidney. The amount of drug in the blood when equilibrium is reached on any particular dosage

varies widely in patients. After one gram every four hours for at least three days, the amount of free sulfadiazine 3½ to 4 hours after a dose may be as high as 17 mg. per 100 cc. of blood, or as low as 2 mg. per 100 cc.

The following rules have been adopted to govern the use of sulfadiazine at the Rhode Island Hospital to prevent kidney or other untoward complications:

(1) Do not use sulfadiazine unless it is definitely needed.

(2) Do not give a large initial dose to dehydrated patients, or to those with cardiac decompensation, or with a history of kidney damage.

(3) Treat dehydration with intravenous fluids before starting the drug.

(4) Watch urine pH, and 24 hour volume and color carefully. Use alkalies to raise a low pH, fluids to increase low 24 hour volume, and examine any red or brown urines for hemoglobin and cells.

(5) $NaHCO_3$ up to 10 grams, with each dose of sulfadiazine, should be given to all patients without cardiac decompensation or edema.

(6) When edema or cardiac decompensation is present, $KHCO_3$, not over 10 grams per day, should be used instead of $NaHCO_3$. If the patient is getting digitalis, the $KHCO_3$ should be limited to 5 grams per day.

(7) When no oral therapy is possible, sodium sulfadiazine administered intravenously supplies the sodium, and unless otherwise indicated, sodium lactate should not be given.

(8) An initial blood count need be checked only after a week, unless otherwise indicated. The blood dyscrasias develop after 7 to 10 days of treatment. If white cell count falls from normal to less than 3,000, the drug should be stopped.

(9) Ammonium chloride therapy for relief of edema and $NaHCO_3$ for alkalinization are incompatible. $KHCO_3$ will do both of these jobs.

(10) Urine pH should be done as a bedside procedure on all cases. This is a simple matter with nitrazine paper or Fisher alkaline-acid test.

(11) Determination of the amounts of free and acetylated drug in the blood should be done after the first 24 hours and about every 2 days.

(12) Water by mouth and sugar solutions by vein are the best treatment for anuria, if it develops. Should these fail, plasma or concentrated plasma should be tried. Other aids of special use are concentrated sodium chloride solutions by vein, diathermy to the kidney, transfusions, or even decapsulation of the kidney.

In our experience, oral administration of nicotinic acid, vitamin C, etc., have seemed to lessen nausea in some cases, but have not seemed to alter complications if and when present. Likewise, fruit juices seem to decrease nausea in some cases but do not seem to lessen renal and other complications.

It would naturally be assumed that such preparations as succynl, sulfathiazole, phthalysulfathiazole, etc., which are little absorbed, would have fewer reactions than the usually administered sulfonamides.

SUMMARY

Complications following the administration of sulfonamides, especially when given without adequate doses of alkali and abundant fluid intake are apparently on the increase, judging from the number of complicated cases being seen lately. The sulfonamides are a valuable and potent therapeutic agent when properly administered in conjunction with adequate alkalies and abundant fluids. However, a careful clinical and laboratory check-up is necessary if unwanted complications are to be avoided. The writer prefers sulfathiazole to any other form, except in meningitis, where sulfadiazine is the preferable drug. In pre-operative preparation for colonic surgery, phthalysulfathiazole has been found very satisfactory, and no reactions have been encountered in its use.

XUM

THE IMPORTANCE OF CEREBROSPINAL FLUID EXAMINATION IN SYPHILIS*

LEWIS W. MCILHANY, M.D.,
and
J. N. DUDLEY, M.D.,
Newport News, Virginia.

During the past few months, following a review of patient records in the Newport News Venereal Disease Clinic, an obligatory consideration in the handling of syphilis cases has been recalled to our attention with emphasis. The point in question is one already known, and brings to mind the academic fundamentals drilled into our heads during medical school lectures. Nevertheless, it is a fact of sufficient importance to be brought back into focus from time to time, lest we forget—to the great detriment to some of our patients.

The question here considered is the absolute necessity for examination of the cerebrospinal fluid. This should be a routine part of our diagnostic and treatment control procedures, to be absolutely insisted upon in the handling of every case of syphilis.

Until about twenty months ago, cerebrospinal fluid examinations were not routinely made on syphilis cases in the Newport News City Clinic. When these examinations were started, there was an enormous back-log of records to be considered. Because of the time element, and because of lack of sufficient personnel and laboratory facilities, it could not be hoped that all these patients could be tested in a short time. We were obliged to select the cases to be examined. There were many patients who had been under treatment for a long time, whose diagnoses were "latent syphilis", and who (under routine procedures) were ready, or almost ready, to be probated from treatment as "cured", "arrested", or "Wassermann-fast". It is in this group that most of the cerebrospinal fluid examinations have been made. There is now a fixed rule of the clinic that antisyphilitic treatment not be interrupted nor terminated before this examination has been completed. Another rule adhered to is that no patient can be presumed "cured", and allowed to stop treatment as such, until the blood serologic test for syphilis has become negative and remained so for at least one year. During this year, treatment must be regular, and the serologic test is repeated every eight to ten weeks.

When treatment has progressed to the point where its termination may be considered, the necessity for lumbar tap is explained to these patients, and the examination made. A number of these cases, considered as latent syphilitics—on the basis of lack of symptoms and negative physical findings—were found to have definite involvement of the central nervous system. Since the Kolmer test on these fluids is the only specific test of those made, we are considering in this discussion as positive only those fluids on which the Kolmer quantitative test has shown some degree of definite positivity.

The spinal fluid quantitive Kolmer and blood serology in the last 100 cases having cerebrospinal fluid examination are summarized in the accompanying chart. It is noteworthy that prior to this examination all but one of these cases had been classified as "latent syphilis" because of absolute lack of symptoms and physical signs to suggest the involvement of any vital organ or system.

SEROLOGIC AND CEREBROSPINAL FLUID FINDINGS IN THE LAST 100 CASES EXAMINED IN THE NEWPORT NEWS CITY CLINIC

1. Spinal Fluid Positive; Blood Serologic Test Negative	6
2. Spinal Fluid Positive; Blood Serologic Test Doubtful	1
3. Spinal Fluid Positive; Blood Serologic Test Positive	4
4. Spinal Fluid Negative; Blood Serologic Test Negative	38
5. Spinal Fluid Negative; Blood Serologic Test Doubtful	16
6. Spinal Fluid Negative; Blood Serologic Test Positive	35
7. TOTAL OF SERIES CONSIDERED	100

It is to be noted that of these 100 cases, 44 had negative blood serologic tests for syphilis, and 17 had doubtful serologic reports. In the 44 cases with negative serologic tests, there were six which had positive cerebrospinal fluid. One of the 17 cases with doubtful serology had positive cerebrospinal fluid. Had this involvement of the central nervous system not been detected, serious results probably would have been encountered after treatment had been routinely stopped following a year of serologic negativity. It is this type of case which will so often needlessly develop symptoms and signs of progressive and destructive neurosyphilis—sometimes years after treatment has been terminated.

*From a paper presented to the Warwick County Medical Society, November 13, 1945.

Of course, while the possibility of the existence of neurosyphilis in sero-negative syphilitics is constantly kept in mind, the uncovering of six such cases in 44 (13.6 per cent) emphasized to us the importance of cerebrospinal fluid examination in all cases of syphilis.

We feel that Stokes, in his forceful and to-the-point" style, has expressed in a way which cannot be improved the importance of *spinal fluid examination in all syphilitics.* In his text, Modern Clinical Syphilology, he has made the following points which should never be lost to mind: This examination is of absolutely fundamental importance in the diagnosis of syphilis, as a check on treatment control, and as a necessary test before deciding on the question of terminating treatment. Positive spinal fluid findings—frequently of a marked degree—usually precede by long intervals the first signs and symptoms of central nervous system involvement. Since the examination of spinal fluid may reveal the only evidence of an asymptomatic neurosyphilis, it should be a routine and obligatory part of the management of all cases of syphilis. A quotation from this text gives emphasis to the point here made:

"There can no longer be any reasonable question of the fact that the cerebrospinal fluid in latent syphilis may present absolutely the only evidence of the disease, the Wassermann reaction on the blood being persistently negative, * * * and functional impairment of the nervous system not having proceeded to the point where any neurologic evidence of the disease can be identified."

When a patient enters a clinic or a physician's office for the purpose of receiving antisyphilitic treatment, the physician in charge of the case assumes responsibility—not only for the patient's immediate complaint, but for the future course of the disease—insofar as he is able to control the infection. To deprive the patient of special treatment methods indicated in neurosyphilis because of ignorance of its presence is to shirk this responsibility. There have been many cases of central nervous system syphilis which have progressed to a degree of deterioration beyond the help of medical ability, because treatment—perhaps years before—had been stopped and the patient considered cured without having received the benefit of a spinal fluid examination. This examination would have revealed the existence of the neurosyphilis, and the treatment would have been directed against this serious involvement instead of being terminated. Knowledge of the existence of neurosyphilis, in the asymptomatic stage and often with serologic negativity, is of the utmost importance in order to prevent many late debilitating and fatal consequences.

CONCLUSION

The importance of cerebrospinal fluid examination as an integral part of the management of every case of syphilis cannot be over-emphasized. By this comparatively simple procedure, many needless late serious effects of the disease can be avoided. Neurosyphilis can and does occur in the absence of symptoms and physical signs when the blood serologic test is persistently negative.

Schering Handy Literature File Presented to Physicians.

A sturdy cloth-bound literature filing box is being presented to all physicians by Schering Corporation of Bloomfield and Union, New Jersey, manufacturers of important endocrine and pharmaceutical preparations for the medical profession. Through direct mail, the physician receives many scientific folders designed to keep him well informed on the latest developments in endocrinology and other pharmaceutical fields. Many physicians have desired a file box to preserve this valuable literature for ready reference. Designed to simulate a technical reference text and bound in red-purple cloth and stamped in gold, the handy file boxes are presented free of charge as another Schering service to the practitioner.

XUM

PULMONARY ACTINOMYCOSIS DUE TO ACTINOMYCES ASTEROIDES*

FREDERICK W. SHAW M.D.,†
REBECCA A. HOLT, M.A.,
and
EDWARD S. RAY, M.D.,
Richmond, Virginia.

According to Topley and Wilson[1] in infections due to the aerobic species of the genus *Actinomyces*, either the acid-fast or non-acid-fast type may be the causative agent. We wish to report a case of actinomycosis of the lung with involvement of right buttock and left pleura from which *Actinomyces asteroides*, an aerobic, feebly acid-fast variety, was isolated from the pleural fluid and draining sinuses.

This actinomycete was first isolated and described by Eppinger[2] in 1891 from a brain abscess in a glass-grinder. Pseudotubercles were noticed in the lung and pleura, as well as in old calcified abscesses in the bronchial and supraclavicular glands. The disease was called pseudotuberculosis cladothrichica and the organism, *Cladothrix asteroides*. In 1902, MacCallum[3] reported a case of peritonitis in a negro child due to *Actinomyces asteroides*. Claypole[4] in 1913 first showed this organism to possess feeble acid-fast properties. Data on 26 cases due to an acid-fast actinomycete were collected from the literature by Henrici and Gardner,[5] in 1921. An aerobic, acid-fast species of actinomycete was reported by Goldworthy in 1937[6] in Australia as the causative agent in a case of pulmonary actinomycosis with metastatic spread of the infection to the extent that generalization had apparently occurred one month before death. He pointed out that the physical signs of tuberculous infections of the lung are similar to those of the pulmonary actinomycosis, except that tuberculosis is more common in the upper lobes, whereas, with actinomycosis the lower lobes more often become involved. He also considered differential diagnosis to be difficult without bacteriologic aid. Carter in 1937[7] expressed the opinion that radiologic examination fails to give any definite help in diagnosis, except when atypical radiograms of lungs suspected to be tuberculous promote decisive bacteriologic investigation. Kessel in1938[8,9] isolated *Actinomyces asteroides* from the lung of a patient exhibiting symptoms of both meningitis and pneumonia. The strain was pathogenic for a number of common laboratory animals, killing them as a rule within a week. Drake and Henrici[10] reported in 1943 that this actinomycete has little invasive power for rabbits and guinea pigs and that all attempts to produce a progressive disease similar to tuberculosis failed. They were able to induce a specific allergic state in rabbits and guinea pigs against *Actinomyces asteroides* with regularity by the intratesticular infection of mineral oil suspensions of live organisms. This allergic state was demonstrated by skin tests with crude extracts of unheated organisms or with purified protein or polysaccharide fractions.

An aerobic non-acid-fast actinomycete, *Actinomyces graminis* (Bostroem), was isolated by Holt[11] in 1941 and in 1946 from brain abscesses in the left parietal lobe. Lynch and Holt[12] in 1944 reported the finding again of this species of aerobic non-acid-fast actinomycete in the case of a pulmonary actinomycosis involving the upper lobe of the lung, with invasion of the pericardium, subacute adhesive pericarditis, chronic myocarditis, and left empyema. The localization of the infection in the left upper lobe was in contrast to the findings of Goldsworthy, as above reported.

CASE REPORT

History: E. J., a 34 year old white woman, was referred to the Medical College of Virginia Hospital on August 28, 1943, by Dr. B. B. Bagby, Jr.‡ She had lost 25 pounds in weight over a twelve month period and had suffered some weakness and anorexia. In the Spring of 1943 she developed a hacking, non-productive cough and pain in her left chest. These symptoms increased in severity, and her cough became productive of purulent sputum with an occasional small hemoptysis. A film of her chest was made in May, 1943, and a minimal infiltrative lesion was noted in both infraclavicular areas with a small amount of fluid at the left base (Fig. 1).

*From the Departments of Bacteriology and Parasitology and Medicine, Medical College of Virginia.
†Deceased.
‡This clinical report was obtained through the courtesy of Dr. B. B. Bagby, Jr., Medical Director, Pine Camp Hospital, Richmond, Virginia.

The diagnosis of bilateral pulmonary tuberculosis was made, and she was admitted to Pine Camp Hospital in June, 1943. She was acutely ill and, clinically, she was much sicker than one would expect from the extent of her pulmonary disease. The

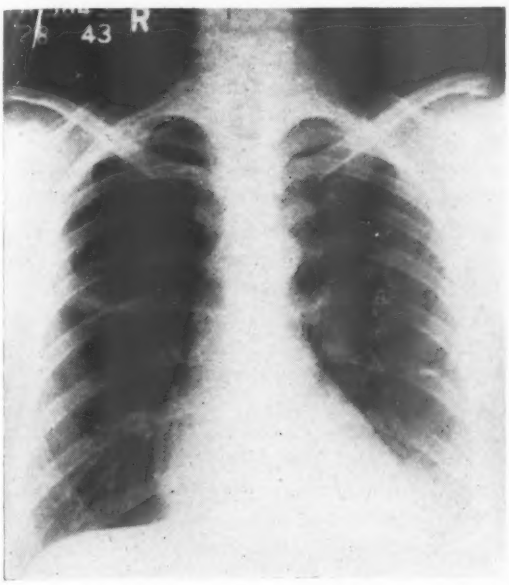

Fig. 1.

only abnormal physical signs were those of a small effusion at the left base. W.B.C. was 28,000 with 77 per cent polys and 23 per cent lymphs. During the latter part of July, because of the severe pleuritic pain on the left, serous pleural fluid was aspirated and replaced with a small amount of air. Examination of the pleural fluid and sputum failed to reveal tubercle bacilli. The presence of Gram positive filaments resembling actinomycetes was demonstrated in smear preparation stained by Gram's method by us in this pleural fluid. In August she developed an abscess over her right buttock that was incised and drained. Actinomycetes were also found by us in the pus of the abscess. She was then transferred to the Medical College of Virginia Hospital.

Physical Examination: Temperature, 101°; pulse, 100; respiration, 34; blood pressure, 120/80. Admission examination revealed a well developed and well nourished white woman, appearing critically ill and in obvious respiratory distress. She was moderately cyanotic. Signs of pneumothorax were present over the left thorax, and there was moderate displacement of the heart and trachea to the right. On the medial aspect of the right buttock was a two centimeter incision with a small amount of brownish purulent discharge. Chest film (Fig. 2) revealed a large left pneumothorax with heart and mediastinum markedly displaced to the right; there was a small amount of pleural fluid on the left. Films of cervical and thoracic spine and of the pelvis revealed no abnormalities of the bony structure.

Laboratory Examinations: Urinalysis was essentially negative. R.B.C., 3.6; Hbg, 49 per cent; W.B.C. 18,050; polys, 74 per cent; lymphs, 20 per cent; monos, 5 per cent; basophils, 1 per cent. Blood chemistry: sugar, 84; N.P.N., 30 mgm. per cent. Blood culture: negative. Examinations of sputum for tubercle bacilli and for actinomyces were repeatedly negative.

Hospital Course: Patient remained acutely ill and severely dyspneic despite frequent aspirations of air from the left pleural space. The pressure within the pneumothorax space remained around 8-12 centimeters of water above atmospheric pressure, and it was obvious that a "tension" pneumo-

Fig. 2.

thorax was present. Temperature remained between 101° and 102°. On September 4, 1943, she appeared worse and examination of her chest revealed an increase in pleural fluid, which was confirmed by chest film. A diagnostic aspiration revealed

thick, cream colored pus that had an extremely foul odor. Many feebly acid-fast and Gram positive filaments were found on direct smear and were identified by cultural means as *Actinomyces asteroides*. Surgical drainage of the empyema was instituted. Three centimeters of the 8th rib in the anterior axillary line were removed; a large rubber tube was inserted and closed drainage was instituted. Following the rib resection, there was definite improvement clinically with remarkable relief of her dyspnea. However, her temperature continued elevated to 100°. Potassium iodide and thymol were given by mouth without any significant effect on her general

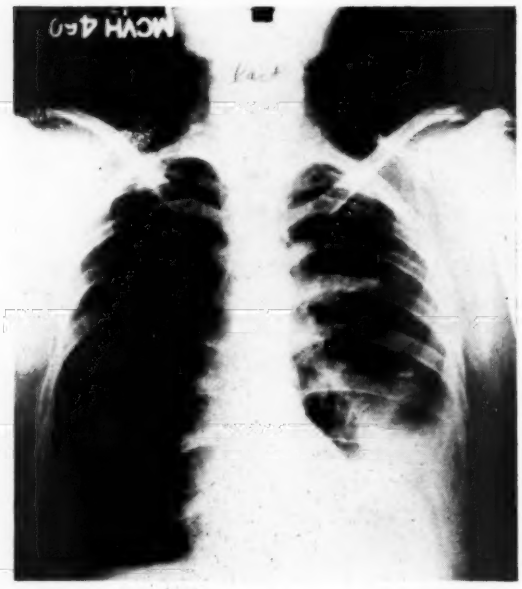

Fig. 3.

condition or on the amount of empyema drainage with the patient's temperature remaining between 99° and 100°. She suffered anorexia and loss of weight (approximately twenty pounds over a period of one month). She remained anemic and it was necessary to give her blood transfusions every three or four days to keep her hemoglobin above 60 per cent of normal. Because of her failure to improve, penicillin was begun on October 13, 1943, and 50,000 units were administered daily by continuous intravenous drip for ten days. A larger dose was impossible because at the time the supply of available penicillin was quite limited. Before penicillin was begun, she developed an infection in her left breast that suppurated and was drained surgically on October 16, 1943. Following penicillin therapy the drainage from the pleural space, as well as that from the breast abscess, gradually decreased, but did not cease until about two months later. Actinomyces disappeared from the empyema drainage, and repeated examinations thereafter failed to reveal this organism. Clinically, she improved slowly over this same period, but she continued to run a low grade temperature elevation (99°-100°), and on November 26, 1943, because of this fever, she was given sulfadiazine by mouth. Her temperature returned to normal on sulfadiazine and, clinically, it was felt that she improved more rapidly while taking this drug. She gradually became ambulatory and was discharged to a convalescent home on December 9, 1943. Chest film (Fig. 3) at time of discharge revealed that the lung had completely re-expanded with residual pleural thickening and probably a small amount of fluid.

She continued to improve and was able to return to work in May, 1944, as a seamstress. She continued apparently well until November, 1944, when serosanguineous material again drained from her right buttock. The sinus tract was outlined with lipiodol and then excised. It was found not to involve the bone. Histological examination of the sinus revealed non-specific granulation tissue. She was again discharged, apparently well.

In March, 1945, she developed severe pain in her lower left chest, a swelling over the same area in the posterior axillary line, and a cough productive of bloody, foul smelling sputum. The abscess (empyema necessitatis) ruptured spontaneously and drained on March 27, 1945. About 300 c.c. of green pus, mixed with blood, were evacuated. Examination of sputum and empyema fluid revealed actinomycetes. The chest film following this drainage revealed a pyopneumothorax. A catheter was introduced into the empyema pocket to promote drainage. In addition she was given penicillin, 15,000 units every three hours for two weeks. After a few weeks the empyema space was obliterated.

Because of recurrent attacks of biliary colic, she was re-admitted to the hospital on July 2, 1945. Cholecystogram revealed a non-functioning gallbladder. It was also found that she had an ulceration of the cervix, a biopsy of which revealed a squamous cell carcinoma, grade 2. She received x-ray therapy to the pelvic organs for a total of 9,000

roentgen units.

On August 3, 1945, she developed moderate severe pain in her left lower abdomen and a mass was outlined in the same region that was thought to be inflammatory. Exploration revealed a large, apparently inflammatory mass involving the sigmoid and upper part of the rectum. This mass was removed and the pathological diagnosis was "probably endometriosis, with no evidence of actinomycetes found".

In September, 1945, a cholecystectomy was done and the gall-bladder was found to be the seat of a chronic and subacute inflammatory process with approximately twenty irregular faceted stones. Penicil-

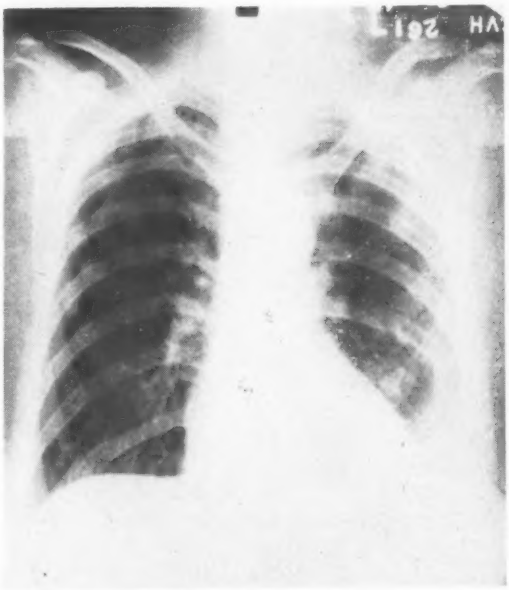

Fig. 4.

lin was again given intramuscularly following this operation and a total of 8,000,000 units was administered over a seven week period (20,000 units every three hours). The reason for the large total dosage of penicillin was that the reports in the current literature indicated that such dosage was necessary for adequate "cure" of actinomycotic infection.

She was discharged asymptomatic and without clinical evidence of actinomycosis in December, 1945. Chest film prior to discharge (Fig. 4) revealed a thickened pleura on the left with no apparent residual empyema.

Bacteriologic Examinations: Actinomyces asteroides isolated from this case possessed the following characteristics:

Morphology. Pleomorphism and metachromatism pronounced. In culture (Fig. 5) appears as small

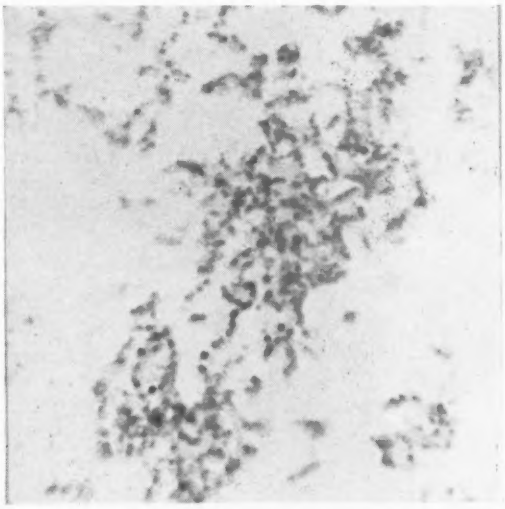

Fig. 5.—Smear preparation stained by Gram's method showing marked metachromatism and pleomorphism of *Actinomyces asteroides* from a crushed colony. X1440.

granular and solid rods, long granular rods and solid and granular segmented filaments, sometimes branching. In tissue and fluids, no *Drusen* form as with anaerobic species. Instead (Fig. 6), pleo-

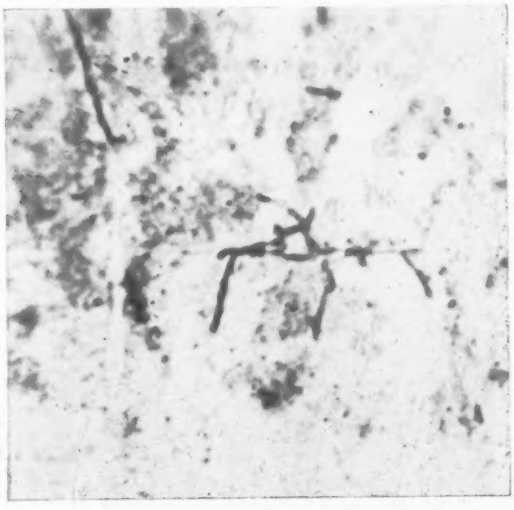

Fig. 6.—Smear preparation of pleural fluid stained by Gram's method showing pleomorphic forms of *Actinomyces asteroides* varying from coccoid and shorter granular rods through the metachromatic branching filaments. X1440.

XUM

morphic forms varying from the small granular rods through the shorter and longer, solid and granular filaments are seen. The branching granular inter-

Fig. 7.—Smear preparation stained by Gram's method showing felted granular mycelium with branching of *Actinomyces asteroides* in pleural fluid. No radical granules or *Drusen* seen. X1440.

lacing forms are most frequently seen in tissues and fluids (Fig. 7). *Tinctorial Property:* Gram positive. Feebly acid-fast when first isolated. Acid-fast

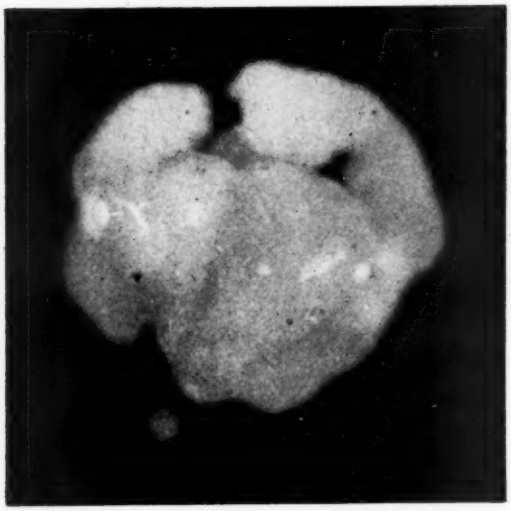

Fig. 8.—Colony of *Actinomyces asteroides* cultivated in semi-solid dextrose brain infusion agar showing a "cauliflower" appearance. X25.

property tends to disappear under cultivation. *Motility:* Non-motile.

Biological Properties: Aerobic. Growth somewhat inhibited anaerobically. Small granular rods resembling diphtheroids seen after prolonged anaerobic cultivation and in older aerobic cultures. Grows on ordinary culture media at 20° C.-37° C. in 48 to 72 hours.

Veal Infusion Blood Agar. Surface colony formation occurs within 24 to 48 hours. Early colony appears as raised, dry or wrinkled with an opaque to whitish center and a moist glistening, more translucent periphery. Later the center of the colony

Fig. 9.—Section showing an actinomycotic abscess on outer surface of liver of mouse. X180.

becomes ochre or yellowish-orange in color with less translucent margin, sometimes mycelioid.

Semi-Solid Dextrose Brain Infusion Agar. Uniform white opaque surface growth occurs early. Ball-like colony soon forms which after several weeks deepens in color and differentiates itself into a "cauliflower" appearance (Fig. 8) to us, although

a "star-shaped" appearance is the descriptive term commonly used.

Dextrose Broth. Early white surface growth, which is deposited at intervals. Older deep growth acquires ochre color. No turbidity.

Loeffler's Blood Serum. Colony formation similar to that seen on blood agar streak plates.

Gelatin. Grows very poorly and slowly. No liquefaction.

Milk. Early surface growth white, later appearing ochre in color. No change, or slightly alkaline.

Chopped Meat. Growth inhibited under anaerobic conditions.

Brewer's Medium. Growth very poor on surface. No deep growth.

Carbohydrate Semi-Solid Infusion Agar. No fermentation after four weeks on dextrose, lactose, saccharose, maltose, mannite, xylose, dulcite, dextrin, sorbitol, levulose, arabinose, or inosite. Early surface growth white; later colonies show a yellowish-orange color, scant deep growth.

Pathogenic Properties: A mouse was injected intraperitoneally with 0.5 c.c. saline suspension of a young culture of this actinomycete and sacrificed in less than two weeks. On the outer surface of the liver a small, walled-off abscess was found (Fig 9). Under low power, one gained the impression of a nodule produced by "ray fungi". However, closer study revealed an abscess with well defined felted and granular mycelium, sometimes branching.

COMMENTS

An interesting feature of this case of actinomycosis is that the patient remained apparently well for eleven months after her initial course of treatment. The infection must have remained dormant in the pleural cavity over this period of time. This suggests the necessity of a follow-up period of several years before the final results of the different therapeutic measures can be accurately evaluated.

In the case reported, the clinical impression was that her initial recovery was influenced more by sulfadiazine therapy than by the relatively small dosage of penicillin (500,000 units). We believe that the dosage of penicillin used initially in this case was entirely inadequate and that a total of 5-10 million units is advisable with the maximum dosage indicated in pulmonary lesions. Whether to give the penicillin in large doses and over a short period of time (e.g. 14 days) or whether to prolong the treatment over a period of 6-12 weeks by using smaller doses is debatable at the present time. McCrea, Steven and Williams[13] recommend that the penicillin be given over a period of 14 days with doses of 80,000 every three hours. A prolonged period of treatment with smaller individual doses has been advocated by Walker and Hamilton.[14]

It is to be emphasized that adequate surgical drainage of all suppurative lesions remains the basis of the treatment of actinomycosis. Instillation of penicillin into the pleural space is not recommended in cases of empyema, except as an adjunct to surgical drainage.

Dobson and Cutting[15] have shown that in vitro there is considerable variation in the susceptibility of the different strains of actinomycetes to penicillin and sulfadiazine which makes for further difficulty in evaluating therapeutic results. The same authors showed that in vitro, unless high concentrations of penicillin are used, the drug appears slightly inferior to sulfadiazine and that the combination of the two drugs in the usual dosage does not improve the results.

The Nomenclature and Classification of the Actinomycetes: The authors[16] feel that the general clinical term actinomycosis should be retained for all disease in man or animal due to any member of the family *Actinomycetaceae* Buchanan. Our views are based on the opinion that too much confusion has been inserted already into the literature by those whose aims are to satisfy both the clinician and the taxonomist. However, we agree with Waksman and Henrici[17] upon the need of differentiating more satisfactorily for the taxonomist and bacteriologist, those members of the family *Actinomycetaceae,* in a manner that will comply with both the microbiological and botanical codes and the taxonomic data. Their nomenclature and classification of the actinomycetes published in 1943 seems to us to be useful. They present a classification which retains the morphological subdivisions made by Waksman in 1940[18] and applies certain subdivision names. Of interest in connection with this paper, he gives the generic name of *Nocardia* Trevisan to those actinomycetes belonging to the family *Actinomycetaceae* Buchanan and producing true mycelium which in vegetative forms fragment into bacillary or coccoid elements and which are aerobic partially acid-fast or non-acid-fast. The other member of this family which is anaerobic or microaerophilic, parasitic and non-

XUM

acid-fast is given the generic name of *Actinomyces* Harz. We predict that the nocardiosis will assume recognition for the disease produced by the aerobic forms, although we discourage its acceptance. For this reason and to avoid further confusion in the literature especially for the clinician, we have retained the term actinomycosis and the genus *Actinomyces*. MacCallum[3] as early as 1902 expressed the belief that the genus should be called *Actinomyces* instead of *Cladothrix* or *Streptothrix*.

SUMMARY

1. A case of pulmonary actinomycosis that simulated pulmonary tuberculosis in the early clinical course is reported.

2. An apparent "cure" results from surgical drainage of empyema and soft tissue abscesses followed by penicillin therapy.

3. A large total dosage (5-10 million units) of penicillin is recommended in the chemotherapy of actinomycosis with adequate surgical drainage of all suppurative lesions.

4. *Actinomyces asteroides* isolated is an aerobic, feebly acid-fast actinomycete. The tinctorial, morphological, cultural and pathological characteristics are described.

5. Bacteriologic studies are necessary in differential diagnosis. The routine smear preparation of sputum, pleural fluid and pus from abscesses in buttock made earlier treatment possible. It is suggested that both aerobic and anaerobic cultures should be made of all suspected actinomycotic material and that the presence of *Mycobacterium tuberculosis* be ruled out.

BIBLIOGRAPHY

1. Topley, W. W. C., and Wilson, S. S.: The Principles of Bacteriology and Immunity; 2nd Ed. 273, 1936.
2. Eppinger, H.: Uber eine neue pathogene Cladothrix und eine durch sie herbogerufene Pseudotuberkulose. *Beitr. z. path. Anat. u. z. allg. Path.* **9**: 387, 1891.
3. MacCallum, W. G.: On the Life History of *Actinomyces asteroides*. *Centralbl. f. Bakteriol,* **31**:529, 1902.
4. Claypole, E. J.: On the Classification of Streptothrices, Particularly in Their Relation to Bacteria. *J. Exp. Med.* **17**:99, 1913.
5. Henrici, A. T., and Gardner, E. L.: The Acid-Fast Actinomycetes, with a Report of a Case from Which a New Species Was Isolated. *J. Infec. Dis.* **28**: 232, 1921.
6. Goldsworthy, N. E.: Pulmonary Actinomycosis Caused by an Acid-Fast Species of Actinomyces. *J. Path. and Bact.* **45**:17, 1937.
7. Carter, R. A.: Pulmonary Mycotic Infections. *Radiology* **26**:551, 1936.
8. Kessel, John F., and Goolden, E. Burwell: A Comparison of Strains of Actinomyces Recovered from Human Lesions. *Am. J. Trop. Med.* **18**:689, 1938.
9. Kessel, John F.: Personal Communication; February 16, 1942.
10. Drake, Charles H., and Henrici, Arthur T.: *Nocardia asteroides;* Its Pathogenicity and Allergic Properties. *Am. Rev. of Tuberculosis* **48**:184, 1943.
11. Holt, Rebecca A.: Unreported Cases, 1941 and 1946.
12. Lynch, John P., and Holt, Rebecca A.: Pulmonary Actinomycosis Due to *Actinomyces graminis*. *Annals of Internal Med.* **23**:91, 1945.
13. McCrea, J. H., Steven, R. A., and Williams, O. O.: Actinomycotic Infection of Soft Tissue of the Neck; Apparent Cure Following Large Dose of Penicillin. *J. Lab. and Clin. Med.* **6**:509, 1945.
14. Walker, John M., and Hamilton, Joseph W.: The Treatment of Actinomycosis with Penicillin. *Am. Surg.* **121**:373, 1945.
15. Dobson, Leonard, and Cutting, Windsor, C.: Penicillin and Sulfonamides in the Therapy of Actinomycosis. *J.A.M.A.,* July 21, 1945.
16. Shaw, Frederick W., and Holt, Rebecca A.: Unpublished report.
17. Waksman, Selman A., and Henrici, Arthur T.: The Nomenclature and Classification of the Actinomycetes. *J. Bact.* **46**:337, 1943.
18. Waksman, Selman A.: On the Classification of Actinomycetes. *J. Bact.* **39**:549, 1940.

USE OF DEFIBRINATED HUMAN BLOOD FOR CULTURING THE TUBERCLE BACILLUS*

A. W. BENGTSON, DIRECTOR OF LABORATORY,
Catawba Sanatorium, Virginia.

Blood has been used more or less successfully for many years in the cultivation of the tubercle bacillus and we claim no originality for the method or technique. However, we believe it is worthwhile to report our results in a comparative study of 231 consecutive cases of microscopically negative sputa, cultured on the standard media for culture of the tubercle bacillus, such as Lowenstein, Petragnani, Miraglia, and also in defibrinated blood.

Our routine for the examination of sputum is as follows:

The study of three stained smears made directly from the sputum on separate days.

If the first smear is negative, we dehydrate the two other specimens in the incubator for a day or two in order to concentrate them. These are mixed with a few drops of distilled water and smears are made in the usual way.

If these are negative, a twenty-four hour specimen is collected, concentrated and examined.

Having failed to find tubercle bacilli in these specimens by prolonged and careful microscopic examination, culture work is done on the following specimens of sputum. We use the conventional media mentioned above regularly for this work, and for the last twenty months have used defibrinated blood as well.

The efficiency of the recovery of tubercle bacilli from cultures when working with contaminated material—and sputum is contaminated—depends essentially upon the destruction of the secondary bacteria by the acids. It is imperative that the sputum be thoroughly homogenized; that the material to be examined be inserted carefully in the bottom of the centrifuge tube and not smeared on the inside walls of the tube. The acids—oxalic 5 per cent or sulphuric 6 per cent—must be thoroughly mixed with the sputum or the culture will be contaminated and lost. A contaminated culture may represent a lost positive sputum.

We prefer the 50 c.c. centrifuge tubes with constricted lip. The pipette is carefully inserted into the bottom of the tube and 2 c.c. of specimen allowed to run into the bottom. Two c.c. of acid is then allowed to run down the side of the centrifuge tube, with the pipette inserted about half-way down. With a whirling motion the acid forms a thin coating on the inside of the tube. The sputum and acid are then mixed by rotation a few times every five minutes or so for a half hour. The tube is then almost filled with sterile saline, mixed and centrifuged one hour at high speed. The supernatant fluid is poured off and 1 to 1½ c.c. sterile saline is mixed with the sediment with a sterile glass-drawn pipette and bulb. This is inoculated on four tubes of each standard culture medium, or 12 cultures in all. In some cases this is repeated two or three times. The same procedure is used with the defibrinated blood cultures, except that no saline is added to the sediment before inoculating the culture. Instead, defibrinated blood is added directly to the specimen, after the secondaries have been destroyed and the acid removed as in the first step described above. The blood is thoroughly mixed with the specimen by drawing in and out of the pipette a few times. We also scrape the bottom of the tube with the pipette, in order to break the sediment away from the bottom to form a homogenized mixture.

In many laboratories the centrifuge capacity is only 15 c.c.; however, the same technique is used, but instead of 2 c.c. of sputum and acid respectively, 1 c.c. of each is used for the smaller centrifuge tubes. We have used with good results 15 drops of sputum and 15 drops of acid, carefully dropping this with a sterile glass-drawn pipette in the bottom of the tube without smearing the inside walls. We prefer a round bottom tube, because the pointed standard 15 c.c. centrifuge tube is not favorable to the thorough mixing of the sputum and acid that is so essential in this work.

The cultures are incubated for 6-7 weeks, and smears are made and stained in the usual way. As mentioned previously, the method and technique,

*This work was done at Catawba Sanatorium Laboratory by the author and his staff.

though modified slightly, are the accumulated results of other investigators, and are stated here for convenience only. This study was undertaken merely in an effort to determine the efficiency of defibrinated blood as a medium for culture of microscopically negative sputum for the tubercle bacillus. During a period of 20 months, 231 consecutive microscopically negative sputum specimens from admitted patients were examined by the standard method and by the defibrinated blood method, with the following results:

Microscopically negative sputum, positive on human defibrinated blood—20.93 per cent.

Microscopically negative sputum positive on standard media—33.72 per cent, or, 12.79 per cent more positive results with the standard media than with the defibrinated blood culture.

The disadvantages in the use of the whole blood are:

1. The growths cannot be seen in the culture medium and smears must be made and examined.

2. There are 12.79 per cent fewer positives than on the standard media.

The advantages are:

1. It is a simple culture method which will pick up 20.93 per cent positives in microscopically negative sputa which would be missed when no culture method is used.

2. It can be used when the standard method is impractical.

National Health Bill Proposal Dies in Senate Committee.

Commenting editorially on the report that efforts to obtain enactment of the National Health bill at this session of Congress have been abandoned by the Senate Committee on Education and Labor, the July 20 issue of *The Journal of the American Medical Association* says:

However, proponents of the bill assert that it will be introduced at the next Congress when it convenes in January. According to unnamed "persons close to the program," the "Wagner-Murray-Dingell bill was loaded with too much controversy for its sponsors to expect it to reach a voting stage before the election year adjournment begins." This statement from the *New York Times* should be pleasing to the medical profession of the United States, the vast majority of whom have indicated again and again their opposition to the kind of regimentation of medicine embodied in the Wagner-Murray-Dingell legislation. Incidentally, the *New York Times* says that among the witnesses asked not to appear at the hearings on the bill were representatives of organizations vigorously opposed to the legislation.

As we go to press, the following announcement has also just come from the Committee on Education and Labor:

The Education and Labor Committee voted to instruct Senators Pepper and Taft to draw up a resolution embodying the recommendations of the Committee relative to child health. These recommendations would express the sense of the Committee that a total increase of $31,500,000 for child welfare authorizations should be provided. On July 15 Senators Pepper and Taft introduced Senate Joint Resolution No. 177, amending title 5 of the Social Security Act, to provide for increasing grants to the states for crippled children, maternal and child health and child welfare.

This resolution will go now to the finance committee of the Senate for consideration and then to the appropriations committee of the House for its consideration. In case of favorable action, which at this time seems doubtful, the administration of these additional funds will be under the same regulations and controls as previous appropriations for the Children's Bureau.

By action of the United States Senate, President Truman's reorganization plan becomes effective so that the Children's Bureau will be transferred from the Department of Labor to the Federal Security Agency, where its activities will be coordinated with those of the United States Public Health Service and other governmental agencies having similar functions.

XUM

SURGICAL LESIONS OF THE GREATER OMENTUM

E. M. FUSCO, M.D.,
Grundy, Virginia.

The greater omentum, though a useful abdominal adornment, is seldom considered as a primary site of surgical disease. Though it is often the secondary recipient of metastatic deposits and inflammatory processes, it is seldom if ever the primary donor of abdominal lesions.

It is my pleasure to report three cases in which the greater omentum was the seat of disease requiring surgical treatment. Two of the cases—volvulus of the omentum—were not diagnosed prior to operation. The third case—thrombosis of the omental artery—was diagnosed correctly.

Case 1: W. M., a white male adult of 45 years, was brought to the hospital complaining of pain in the R. L. Q. of 24 hours' duration. His temperature was 101 and he was vomiting. The white blood count was 24,000 and the abdomen was exquisitely tender over McBurney's area. Rebound tenderness was present. He did not appear shocked and there was no previous history of gastric dyspepsia. The blood pressure was 140/82 and the urine was negative. No masses were felt on abdominal examination.

A diagnosis of acute appendicitis was made. The abdomen was opened under GOE through a McBurney incision. An orange-sized, dark mass immediately presented itself. It was recognized immediately as omentum. The incision was enlarged and the mass delivered. It was then seen to be a volvulus of the greater omentum with a pedicle attached to the colon. The mass was easily resected by ligating the pedicle. Convalescence uneventful.

Case 2: J. O., a white female adult of 43 years, was brought to the hospital complaining of pain in the R. U. Q. of about 36 hours' duration. The pain was acute and accompanied by vomiting. There was no previous history of abdominal disease. She was very obese and no masses were felt. There was a slight icteric tint to the skin. The white blood count was 22,000. She was not in shock but appeared seriously ill. Our diagnosis was acute cholecystitis with probable empyema of the gall-bladder. The temperature on admission was 101. We elected conservative treatment for two days in which time fluids were urged. The patient did not improve, however, and on the third day her temperature was 102 and she was exquisitely tender over the gall-bladder area. No masses were felt.

Surgery was then elected over a tentative diagnosis of empyema of the gall-bladder. The abdomen was entered through an upper right rectus incision under spinal anesthesia. A large, black, grapefruit-sized mass immediately presented itself which was not attached and was sharply demarcated and smooth in appearance.

The mass was delivered easily and detached itself from its pedicle. No ligatures were necessary. It was then seen to be a ball of the greater omentum with a pedicle attached to the stomach and colon. The liver, stomach, and gall-bladder were entirely normal. There was a pronounced twist in the base of the omentum which substantiated the diagnosis of volvulus of the greater omentum. Convalescence was very stormy, and intensive supportive treatment was necessary. The complications which occurred were paralytic ileus and atelectasis. Recovery.

Case 3: A. H., a fragile white woman of 75 years, is the prize case of our series. She had been under treatment for years for hypertensive arteriosclerotic heart disease with auricular fibrillation. Two weeks before admission she fell and suffered a Colles' fracture of the left hand and numerous bruises and contusions. The fracture was reduced under local anesthesia and the patient allowed to return home. While at home she refused to leave her bed, saying she felt too bad. On the night of admission she suffered a sudden, sharp pain in the left lower quadrant and was brought to the Grundy hospital. She rocked from side to side in the bed moaning pitifully. There was exquisite tenderness in the left lower abdomen limited to that area. A mass was felt in the left lower quadrant and the patient being cadaveric in appearance, it was easily seen as a mild bulging.

She was submitted to surgery under local anesthesia with a tentative diagnosis of embolism involving the greater omentum and possibly the coeliac axis. The anesthesia was supplemented by 5 cc. of intocostrin and ¼ grain of morphine. A lower rectus splitting incision was used. The mass pre-

XUM

sented itself immediately, was dark in appearance, and was at once identified as greater omentum. About three-fourths of the greater omentum was resected under clamp and ligature and while ligating the base of the mass, the omental branch of the left gastro-epiploic artery was seen to be thrombosed. The thrombus was easily followed by sense of touch to the tip of the spleen. It was necessary to resect more of the omentum as far as the gastro-splenic ligament. No other organs were involved in this mass. Convalescence was uneventful and the patient was discharged on the twelfth post-operative day. The final diagnosis was thrombosis of the left omental branch of the gastro-epiploic artery with segmental gangrene of the greater omentum.

CONCLUSION

Three cases are presented, two of volvulus of the greater omentum, and one of segmental gangrene due to thrombosis of the omental artery. Diagnosis was missed on the first two cases and made on the third. In the third case we felt thrombosis was more probable than embolism because of the trauma experienced but of course this is problematical in view of the fibrillation. The presence of an exquisitely tender mass with a sudden onset and vomiting seem to be the chief diagnostic criteria.

The Washington Institute of Medicine

Is this year observing its fifteenth anniversary.

Founded in Washington in 1931 as a membership association devoted to medical bibliographical research, the Institute utilizes the facilities of the Army Medical Library, largest medical library in the world. Its staff has achieved world-wide recognition for its research on numerous special projects conducted not only for its members, but for many medical and scientic organizations, some of them of international calibre.

Today, however, the Institute makes its greatest contribution to medical progress by means of its unusual Quarterly Review publications, which have achieved world-wide recognition. In these journals, the results of the Institute's comprehensive program of library research are made available to the entire medical profession.

Each of these quarterlies covers one specialized field of medicine, and is edited by a large board of authorities in that field, who provide authoritative abstracts and thoughtful commentaries on all noteworthy advances published in the medical literature of the entire world.

The oldest of the group, the Quarterly Review of Obstetrics and Gynecology, was first published in 1936 (under the name, "Obstetrics-Gynecology Survey"). This was soon followed by Quarterly Reviews covering other specialized fields, including Othorhinolaryngology and Broncho-Esophagology; Surgery; Medicine; Ophthalmology; Pediatrics; and Urology. A ninth quarterly, General Practice Clinics, reviews advances in the fourteen special fields of greatest concern to the general practitioner. Additional Quarterly Reviews in other special fields are being planned for appearance in the near future.

Penicillin Salve for Eye Infection.

Penicillin ointment is the most effective drug ever used for treating chronic inflammation of the eyelids and their membranous lining, according to Capt. Samuel H. Stein, Medical Corps, Army of the United States.

Captain Stein, writing in the current issue of the *Archives of Ophthalmology*, which is published by the American Medical Association, states that, judging from the results obtained after treating 25 patients with this ointment, it "is more effective than drugs formerly used" in the treatment of this condition since it gives rapid relief from symptoms and clears the infection.

Only two cases failed to respond to this treatment, therefore the author suggests that these might not have been due to an infection but rather to an allergy. The staphylococci, which also are responsible for boils, were the infectious agents in this series of cases.

XUM

THE FORUM

A Heat Resistant Albumin.

Boiling urine must have been one of the first methods to detect albumin. If it remains clear and no coagulation, albumin is not present. If it clouds, the cloud, if due to phosphates, will disappear when dilute acetic acid is added, though it will remain when due to albumin.

Within the last few years, however, I have found three types of albumin that would neither cloud nor coagulate by boiling alone, yet, by adding dilute acetic acid to the urine which was still as clear as "spring water", despite boiling for a long period, a quick cloud and coagulate would then rapidly form and the precipitate would half fill the test tube.

Of the urines of three patients included in this report, one had a large inoperable tumor which was attached to her one and only kidney. The second had a large inoperable tumor which was a recurrence of an ovarian tumor after twenty-five years. It was inoperable chiefly because she refused operation over a period of three years. The third was a case of "tumors" which fortunately proved to be twin boys. The first and second cases died, but number three lived.

The diagnostic significance appeared to point to intra-abdominal pressure.

A. B. GRUBB, M.D.,
Cripple Creek, Virginia.

Virginia Study of Child Health Services.

After the process of organization was completed, the purpose of the Study and its set-up were presented to twenty-five different Medical Societies at their May and June meetings by pediatricians in various sections of the State.

As a result, out of 2,107 questionnaires sent to physicians in private practice, approximately 30 per cent have been filled in and returned. About the same percentage has been completed by pediatricians who were asked to record their medical visits for a period of four weeks.

Nearly half of the general hospitals have been surveyed and half of the nursing homes have completed their forms. Of the Community Health Services 49 of the 51 organized county Health Departments, 44 of the 49 counties without organized Health Departments and 11 of the 12 cities with organized Health Departments have completed their questionnaires.

If anyone reading this item has not filled in his questionnaire will he do so at his earliest convenience? Each person's contribution is of importance in this Study.

Progress and Increased Activities of Virginia Cancer Foundation.

The Virginia Cancer Foundation and the State Department of Public Welfare are working in close cooperation in an effort to improve the diagnosis and treatment of medically indigent cancer patients in every section of the State.

The State Department of Public Welfare has taken over responsibility for certification and referral of all indigent patients cared for at the expense of the Virginia Cancer Foundation, which is the Virginia affiliate of the American Cancer Society.

Doctors, health officers and nurses, local captains of the Virginia Cancer Foundation, and members of the families of cancer patients are now referring to local welfare superintendents all requests for the care of cases with known or suspected cancer coming under the program of the Foundation.

Dr. George Cooper, Jr., University of Virginia radiologist, who is chairman of the Cancer Committee of the Medical Society of Virginia and also director of the Virginia Cancer Foundation, points out that as a result of this new cooperative program there is no reason why any cancer sufferer within the state should lack for prompt and efficient diagnosis and treatment because of medical indigence. At the same time, this program should not interfere in any way with relationships between any doctor and his private patients.

The Virginia Cancer Foundation began six years ago providing treatments for medically indigent cancer sufferers. Only 36 patients were cared for during that first year. So greatly has this program of patient diagnosis and treatment expanded that an average of more than two patients a day were given attention during the first six months of 1946.

Under the new cooperative program, when a cancer case is referred to a local welfare superin-

XUM

tendent, she investigates and must certify as to eligibility for treatment as medically indigent before requesting a clinic appointment from Mrs. Augusta Jarman, executive secretary of the Virginia Cancer Foundation, whose office is in the University of Virginia Hospital, in Charlottesville.

Diagnosis and treatment may be provided at any one of eleven clinics certificated by the Cancer Committee of the Medical Society of Viriginia. Clinics are already being conducted in Charlottesville, Clifton Forge, Hampton, Lynchburg, Newport News, Norfolk, Richmond and Roanoke, at addresses given at the end of this article. Clinics in Alexandria and Danville are to be opened during the autumn.

An appointment for the patient is arranged at the most convenient one of these clinics by Mrs. Jarman, who sends notice of the appointment to the welfare superintendent. The tumor clinic is also notified to expect the patient. If the patient needs transportation to the clinic, this is arranged by the welfare superintendent. Occasionally a patient will go directly to the clinic without his doctors knowledge. Sometimes cancer is discovered after a patient has been admitted to a hospital for another complaint. When this happens, the Virginia Cancer Foundation requests certification of medical indigence from the local welfare superintendent.

After examining the patient, the clinic director sends his medical history back to the University of Virginia headquarters where it is reviewed by the director of the Virginia Cancer Foundation, Dr. Cooper.

When the patient's treatment has been completed, and he has been discharged, a summary of the case is recorded in the office at Charlottesville. Each of the tumor clinics also sends monthly reports of patients seen for check-ups. If the name of a patient scheduled for a clinic check-up is not on the report, a letter is sent to the clinic director asking if he wants the case followed. If the director makes an affirmative reply, a letter is sent directly from the Charlottesville office to the patient. Should the patient continue to remain away from the clinic, and his name not appear on the next monthly check-up report, more positive steps are taken.

From the headquarters in Charlottesville a form in triplicate is sent to Miss Mary I. Mastin, director of the Bureau of Health Nursing, who sends these to the public health nurse nearest the patient with a request for a home visit. After making the visit the public health nurse fills in all three forms, keeps one and sends the other two to Miss Mastin, who, in turn, sends the original to Charlottesville while keeping the other for the records of the newly established Bureau of Cancer Control in the State Department of Health. Should the patient be unable to return for the clinic check-up because of lack of transportation, the Cancer Foundation can ask the help of the Welfare Department in making the needed arrangements.

This follow-up system has been in operation for nearly two years, and has been the means of returning many cases for periodic rechecks. Patients cannot always be trusted to return to the clinics voluntarily, and insisting on regular check-ups the Cancer Foundation has brought about the diagnosis and treatment of many recurrences of cancer.

There's been an added outcome of these home visits and investigations of nurses and welfare workers, who have all too often found other situations in which help was needed. This close co-operation between the Department of Public Welfare and the Virginia Cancer Foundation is not only making early diagnosis and skillful treatment of cancer more readily available to the medically indigent, but is doing a great deal toward the general improvement of the health of the people of Virginia.

The nine tumor clinics now in operation are as follows:

Elizabeth Buxton Tumor Clinic, Dr. M. B. Beecroft, Director, Elizabeth Buxton Hospital, Newport News, Virginia.

Chesapeake & Ohio Tumor Clinic, Dr. J. M. Emmett, Director, Chesapeake & Ohio Hospital, Clifton Forge, Virginia.

Diagnostic Tumor Clinic, Dr. Lomax Gwathmey, Director, Kings Daughters Clinic Bldg., 306 West York Street, Norfolk, Virginia.

Dixie Hospital Tumor Clinic, Dr. Albert A. Creecy, Director, Dixie Hospital, Hampton, Virginia.

Jefferson Hospital Tumor Clinic, Dr. Alfred P. Jones, Director, 1301-1321 Franklin Road, Roanoke 16, Virginia.

Lynchburg Tumor Clinic, Dr. Joseph Houck and Dr. John Devine, Jr., Co-Directors, Outpatient Dept., Lynchburg General Hospital, Lynchburg, Virginia.

McIntire Tumor Clinic, Dr. William H. Parker, Director, University of Virginia Hospital, Charlottesville, Virginia.

Medical College of Virginia Tumor Clinic, Dr. George Zur Williams, Director, Dr. Arthur B. Gathright, Jr., Assistant Director, Medical College of Virginia, 1200 East Broad Street, Richmond 19, Virginia.
Petersburg Tumor Clinic, Dr. Edith I. Miller, Director, Medical Arts Building, Petersburg, Virginia.

The Training of the Graduate Nurse.

To the Editor:

I wish to submit the enclosed article in response to the Guest Editorial by Doctors Carrington Williams and Harry J. Warthen, which appeared in the July issue of the VIRGINIA MEDICAL MONTHLY.

I am submitting my own personal opinions (although I am certain they are shared by many members of the nursing profession) and I do not represent any organization or group of nurses.

I would appreciate any consideration you might give in the publication of the enclosed article. If it should be considered for publication, I wish to request that no change be made in the content without my permission.

ALDA L. DITCHFIELD, R.N., B.S.
Director of Nursing, Riverside Hospital, Newport News, Virginia.

July 18, 1946.

THE EDUCATION OF NURSES

What are some of the duties and responsibilities graduate nurses are called upon to assume in small as well as in large hospitals? Following are but a very few.

1. Basic procedures such as baths, bed making, temperature, pulse and respiration, enemas, etc.
2. Gastic lavage and gavage.
3. Intravenous, intramuscular therapy.
4. Physiotherapy, hydrotherapy, occupational therapy, etc.
5. Taking blood pressures and assisting with or doing all types of diagnostic tests.
6. Administration of medications of all kinds.
7. Recognition of signs and symptoms of a variety of conditions; symptoms of approaching eclampsia in the pre-natal patient, symptoms indicative of brain tumor, symptoms of internal hemorrhage, and many other signs and symptoms of conditions which, if observed early and reported intelligently to the doctor, may save the life of a patient.
8. Administration of anesthesia.
9. During the shortage of doctors she has stood by and held retractors and actually assisted with major operations.
10. Insertion of Levine tubes for Wangensteen suction. Collection and assembly of equipment for complex, complicated treatments which the doctor must administer.
11. Relieve the anesthetist, the pharmacist, and frequently the laboratory technician, the switchboard operator, the housekeeper, the dietitian, yes, and even the maids, the porters, the maintenance man, the plumber, the electrician and the superintendent of the hospital.

What makes the nurse of today so versatile, so indispensable to the physician! Is it the inadequate type of training of thirty or even fifteen years ago that Doctors Williams and Warthen want us to go back to, or is it the fact that our nurses have had a good sound scientific background of knowledge, developed over a very full three year period? (Many of our private duty nurses today, who graduated in the "old days", must call on our young nurses to teach them principles of new procedures which, if they knew the basic principles of Microbiology, Chemistry, and Physics, could do very well without help.)

I say, if doctors continue to make demands on the nurse in the future, as they have done in the past, we will need four, yes, perhaps five years, in order to get everything into the curriculum that will develop the kind of nurse the modern doctor needs, and in most instances wants, as his co-worker.

The basic problems in nursing, today, are not due to the "over-training" of nurses, but are due to the following things, if I may mention but a few:

1. The fact that nursing education, except in a few places in the United States, has never been recognized as an entity aside from the hospital service problem. Hospitals must find a way to take care of their nursing service problems without exploiting the student nurse.
2. Poor personnel policies. Hospitals that have paid good salaries and which have provided good living conditions have, comparatively speaking, had little difficulty in maintaining a fairly stable and adequate nursing staff during the war period.
3. A third basic problem, seldom recognized by doctors and hospital administrators, is that listed as number eleven, under duties and re-

XUM

sponsibilities expected of the graduate nurse. The nurses plea, contrary to Doctors Williams' and Warthen's statement, has always been that they be allowed to nurse the patient and be relieved of every task in the hospital, for which other personnel cannot be found.

The primary objective and aim of every professional nurse is either to *give good* bedside nursing care to the patient herself, or *to teach* others to give good nursing care.

The basic difference of opinion between some members of the medical profession and the nursing profession seems to be not in what a nurse should know, but in the length of time it takes to learn it. The doctor thinks all student nurses are geniuses, able to swallow a mountain of knowledge in one big gulp, while educators, and not nurse educators alone, know from experience that it takes time *to teach,* guide, and direct young people into good techniques of a profession.

The day of *training* nurses is past; we must *educate* nurses, and education takes *time.*

Annual Report: State Department of Health.

When one studies the most recent reports, Thirty-Fifth and Thirty-Sixth, of the State Department of Health, one cannot but be mindful of the tremendous volume of protection given to the public by this department. This, in spite of the fact that in most instances there was an acute shortage of personnel. It is, therefore, noteworthy that those remaining have put forth their best efforts so that the cause of public health has not suffered. Many departments have been consolidated in order to carry on basic functions. Also, such recent laws as to sanitary inspection of hotels and other food establishments, swimming pools, and summer camps have been added to the duties of the department. One of the most acute shortages of personnel was noted in the Bureau of Nursing and much credit is due the relatively small corps remaining for outstanding service and the willingness to assume extra obligations.

Much attention has been given to the water supplies throughout the State, and many new systems were established with the aid of Federal funds. Our large shellfish industry came in for considerable study, careful observation, and inspections.

It is significant to note that during the biennium the death rate was the lowest on record. We must not forget that these were war years, and this is a commendable accomplishment.

During the period covered by this report, June, 1942 to June, 1944, the presence of the various communicable diseases did not show any very marked increase over former years. Poliomyelitis reached an all time low in 1942. Typhoid fever continues to decrease each year from a rate of 8.8 in 1942 to 7.5 in 1943. When one recalls the time that typhoid was in nearly every community, and now only finds 216 cases reported for the entire State, he can see here the great advances in public health over former years. Though several outbreaks are recorded, methods of epidemiology and control are far more efficient, thus enabling the departments to hold these to a minimum.

This complete report is worthy of study by citizens of the State, who, in turn, should bend their efforts toward aiding the Health Commissioner and the personnel of his department in obtaining more appropriations to further this important function for all of the people.

C. L. OUTLAND.

XUM

FURTHER COMMENTS ON THE Rh FACTOR

COMMITTEE ON MATERNAL HEALTH
MEDICAL SOCIETY OF VIRGINIA

In studying the mechanism of the formation of a factor in the plasma capable of agglutinating the red cells of an Rh positive donor, it is to be noted that, during the first pregnancy (with an Rh negative mother and Rh positive father) that factor may be formed but the baby of that pregnancy is usually undisturbed. Even though the father is Rh positive and the mother Rh negative, there will not be an Rh problem produced except in approximately one in fifty cases. With subsequent pregnancies the concentration of that factor may be increased so that the baby of the third or fourth pregnancy may be involved. Frequently the second or third baby may be jaundiced or anemic, then the third or fourth have a more severe blood destruction or be born dead with a hydrops variety of erythroblastosis foetalis.

If the mother were Rh negative and had received an Rh positive blood transfusion during her childhood, she would have developed this factor in the plasma before marriage, and, thereby, endanger the life of her first or second baby. In the same manner the first Rh positive blood transfusion in an Rh negative patient may result in the formation of the agglutinating factor in the patient's plasma so that subsequent transfusions with Rh positive blood increase the concentration of the agglutinating factor to the point that a reaction occurs.

In a woman who has had an erythroblastotic baby, the agglutinating factor is already present in high concentration and, if given a transfusion with Rh positive blood, she would have a severe reaction with the first transfusion.

Levine states that "In the past three years it has become increasingly clear that once an Rh negative individual is immunized either by repeated transfusions or by pregnancies, he or she must be considered as remaining immunized for the remainder of his or her natural lifetime. Thus, a woman who delivered an erythroblastotic infant eleven years previously has tolerated one transfusion of Rh positive blood but the following transfusion with Rh positive blood resulted in a violent reaction and anemia. An Rh negative woman was deprived of an opportunity of having one or two normal Rh positive children because, as a child of six years, she was already immunized by several transfusions. It is significant that, in this case, the first-born had the most severe form of erythroblastosis; ie, foetal hydrops. Accordingly, it is necessary to consider the advisability of introducing in pediatrics the routine practice of carrying out Rh tests in all female patients to be transfused. In transfusing an Rh negative, female infant, it is essential to keep in mind the possibility of future pregnancies. In a broader sense, no girl or woman, regardless of age, should be transfused unless tests for Rh are carried out. Those found to be Rh negative must receive *only* Rh negative blood."

NOTE: Physicians should take the time to allay the fears of prospective mothers since the occurrence of this condition is rather rare. Many women are markedly disturbed because of lay publicity on this subject.

XUM

PUBLIC HEALTH

I. C. RIGGIN, M.D.
State Health Commissioner of Virginia

The report of the Bureau of Communicable Diseases of the State Department of Health for June, 1946, as compared with the same month in 1945, and for the period of January through April, 1946, compared with the same period in 1945, follows:

	June 1946	June 1945	Jan.-June 1946	Jan.-June 1945
Typhoid and Paratyphoid	12	22	39	45
Diarrhea and Dysentery	448	562	1,171	1,583
Measles	2,411	116	12,242	1,185
Scarlet Fever	206	241	1,952	2,542
Diphtheria	26	16	225	133
Poliomyelitis	--	12	8	26
Meningitis	16	21	148	164
Undulant Fever	10	2	29	11
Rocky Mountain Spotted Fever	23	10	31	18
Tularemia	5	6	34	23

POLIOMYELITIS

After two years, 1944 and 1945, in which Virginia experienced increased prevalence in the incidence of poliomyelitis, there should be relatively few cases this year. To date there have been only eight reported, none of which occurred in the month of June. Since June is the beginning of the poliomyelitis season in Virginia, and the month when an increase in this disease often first appears, this observation is significant. Moreover, since 1910, when poliomyelitis was first tabulated in Virginia, there has been only one other year in which no cases were reported in June, and that was 1936, a low year following the epidemic year of 1935.

In reviewing the history of poliomyelitis in Virginia one observation is apparent: a year of high incidence of poliomyelitis is followed by a second when the disease is still unusually prevalent, and then by two to four years of very low incidence. For example, 1923 (148 reported cases) and 1924 (127 reported cases) were followed by four low years, 1929 (325 reported cases) and 1930 (119 reported cases) by four low years, and 1940 (241 reported cases) and 1941 (155 reported cases) by two low years. The one exception is 1935 (685 reported cases) followed immediately by four low years. Judging from past experience then, Virginia has every reason to expect at least two years relatively free from poliomyelitis.

While it is still too early to state exactly where and how hard poliomyelitis will strike this year, it already has appeared in alarming proportions in four places: Miami, Florida; Florence, Alabama; Corpus Christi, Texas; and Denver, Colorado. In these four States the peak number of cases normally occurs anywhere between the first of August and the middle of September. Undoubtedly, then, poliomyelitis is still increasing in these States and will reach epidemic proportions before the year is out.

Through the week ending June 15th, 1,381 cases of poliomyelitis had been reported in the United States this year. This is a little better than one case per hundred thousand population. Being very conservative and saying that any State reporting more than two cases per hundred thousand population up to this time probably will have a marked increase in the incidence of infantile paralysis before the peak season is reached in late summer, the following States should be watched: Alabama, California, Colorado, Florida, Louisiana, Mississippi, Montana, New Mexico, Texas, and Washington. Since Montana, New Mexico and Washington reported most of their cases in February and March, and have had relatively few since, there probably will be no real increase in those States this year. In the others, however, the reports indicate that poliomyelitis is increasing.

WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President---------- MRS. P. M. CHICHESTER, Richmond
President-Elect---------MRS. J. E. HAMNER, Petersburg
Recording Secretary..MRS. NATHAN SCHUMAN, Alexandria
Corresponding Secretary..MRS. L. C. BRAWNER, Richmond
Treasurer----------MRS. REUBEN F. SIMMS, Richmond

The Annual Meeting of the Woman's Auxiliary to the Medical Society of Virginia will be held on Tuesday, October the fifteenth at the Cavalier Hotel, Virginia Beach.

Mrs. H. F. Dormire of Virginia Beach has consented to be chairman of local arrangements. She and her committee and the members of the Norfolk Auxiliary wish to make the convention a happy and successful one.

It is hoped that there will be a full attendance of members of the board of directors, county presidents, presidents-elect, officers, delegates and visitors.

The Doctor's Wife*

ROCK SLEYSTER, M.D.,
President, American Medical Association, 1939.

After an experience of some thirty-six years as the husband of a doctor's wife, I am appreciative of the fact that no single influence helps to develop and mold the doctor as does his nearest partner in the business and adventure of life. The development of character, of personality, of standards, of ideals, of humanness depend upon her influence as upon no other. And his success and influence in his community depend upon these qualities as much as upon his scientific attainments.

We are living in a muddled world—a world which is looking for leadership. The future of medicine and the future of this world depend upon the leadership which it develops. Leadership can influence only as a result of confidence, and it is to you wives of doctors I want to appeal to develop in your men those qualities which will inspire the confidence necessary that they may mold the thought of their community in matters relating to health.

To understand your doctor and his job you must go back to a time (possibly before you knew him), a time when he made the great decision to give his life to the care of the sick. No ambition for power, or fame or glory or riches prompted him in his choice of a career. Rather it was his interest in science and his love of service. It was the highest idealism of youth motivating him when he determined on the hardest, the longest and the most expensive preparatory education to take up a life work whose main reward is the satisfaction of service well done. It is this idealism, this willingness to sacrifice, this sense of values, which you as his partner must share with him and must keep alive in him.

Nothing—and I say this without the slightest mental reservation—nothing is as important in shaping the doctor's career as is his wife and his home. The doctor's wife must share his idealism, appreciate a standard of values held by no other group, and give to him an understanding required of few. Being a doctor's wife is both an art and a career.

First, she can never exercise quite the prerogatives of ownership which other wives claim, for the public feels and exercises a joint sense of ownership in him as well. His time is theirs, day or night, and they do not hesitate to intrude. Plans are difficult to make and to fulfill, and life is full of bitter disappointments because of this, disappointments which the doctor can accept more easily than his wife. His life, his habits, his mode of living, his personality, and even his private affairs are subjects of discussion and criticism, as is true of no other with the possible exception of the clergyman. This requires an unusual restraint on her part and an exercise of emotional control, for as his partner she is the victim of all this as much as he. Instead of reacting with bitterness and resentment, she must be prepared to submerge her feelings and exercise a steadying influence on him.

There are many temptations in his professional career which must be met. There is with need at times the temptation to commercialism. With fatigue, there is the urge for relaxation and amusement at the expense of necessary reading and study

*Address to the Woman's Auxiliary to the American Medical Association in St. Louis, May 17, 1939.
Reprinted in the Bulletin with the permission of Mrs. Sleyster.

that he may bring all that is new to the bedside of the sick. There is the temptation to be truant to the meetings of his medical organization for these same reasons. There is the urge to retaliate and strike back at fancied or actual wrongs at the hands of his colleagues. There is the opportunity to advance at the expense of others by unfair advantage. In all of these, and in many other circumstances, the temptation will be as great to his wife as to the doctor. She will want material rewards, more rest for him, more of his time and companionship—even more than he—and her whole inclination will be to fight fiercely in his defense. But this cannot be; hers must be the influence to keep his aim at the stars, his purpose unchanged, his ideals in no way lowered and his character outstanding and above reproach. Considering all the responsibilities he carries and the support he requires in assuming it, the job of being a doctor's wife is, as I have stated, an art and a career.

But when autumn days are here and the task must be lightened, you will be standing with him in the twilight as he passes on to younger hands the glory of a professional career above reproach, a career perhaps without material reward but a career good and clean and true to all the teachings of a great physician who came to us from Galilee. And as you stand hand and hand and look back over the years, there will be the joy and satisfaction of hearing him say—"You were my partner—it was possible only because of you."

Northampton-Accomac Auxiliary.

The Woman's Auxiliary to the Northampton-Accomac Medical Societies enjoyed its annual summer outing and picnic on July 9th as guests for the third time of Mrs. W. L. Cosby at her cottage, "Funfrus", at Silver Beach. A delicious luncheon was followed by swimming and sun bathing by members and guests, and it was with regret the members took leave of their hostess after such a delightful outing. There were sixteen members and twelve guests present.

At the October meeting the Auxiliary will be the guests of Mrs. John Wise Kellam at her cottage at Silver Beach.

CATHERINE R. TROWER, (MRS. HOLLAND)
Chairman, Press and Publicity.

BOOK ANNOUNCEMENTS

Books received for review are promptly acknowledged in this column. In most cases reviews will be published shortly after the acknowledgment of receipt. However, we assume no obligation in return for the courtesy of those sending us same.

Human Embryology. By BRADLEY M. PATTEN, Ph.D., Professor of Anatomy, University of Michigan Medical School. Philadelphia, The Blakiston Company. 1946. 776 pages, with 1366 drawings and photographs, grouped as 446 illustrations, 53 in color. Cloth. Price $7.00.

Diseases of the Retina. By HERMAN ELWYN, M.D., Senior Assistant Surgeon, New York Eye and Ear Infirmary. Philadelphia, The Blakiston Company. 1946. xi-587 pages, with 170 Illustrations, 19 in color. Cloth. Price $10.00.

A Sketch of Medicine and Pharmacy. With a View of its Progress by the Massengill Family from the Fifteenth to the Twentieth Century. By SAMUEL EVANS MASSENGILL, M.D. Printed by The S. E. Massengill Company, Bristol, Tennessee. 445 pages. Cloth.

Pneumoperitoneum Treatment. By ANDREW LADISLAU BANYAI, M.D., F.A.C.P., F.C.C.P., Associate Clinical Professor of Medicine, Marquette University Medical School, Milwaukee, Wis.; Formerly Preceptor in Tuberculosis, School of Medicine, University of Wisconsin; etc. St. Louis, The C. V. Mosby Company. 1946. 376 pages, with 74 illustrations. Cloth. Price $6.50.

Medical Services by Government. Local, State and Federal. By BERNHARD J. STERN, Ph.D., Lecturer in Sociology, Columbia University. New York, The Commonwealth Fund. 1946. xiv-208 pages. Cloth. Price $1.50.

EDITORIAL

Professional Opportunity

WE are convinced that no piece of legislation, local, state or federal, has ever caused so much discussion of doctors and the medical profession as the Wagner-Murray-Dingell Bill.

In these discussions attention has been directed with great emphasis on (1) the poor health and bad physical conditions of the American people, (2) the distressing need of extending medical care to more of our citizens, (3) a distribution of the cost of medical care among more people and spreading the cost to an individual or family over a longer period of time, (4) the apathy on the part of members of the medical profession to these items of conditions, and (5) the inclination on the part of doctors to be against everything and for nothing.

Proponents and supporters of the Wagner-Murray-Dingell Bill infer by their attitude and action, if they do not indeed say so, that the medical profession is entirely responsible for the health of our citizenry, that doctors have not lived up to their responsibility and furthermore are unwilling to lend an open ear or an extended hand to the medical need of our people.

The public has been told far and wide that the apathetic, *laissez faire* and sit-tight attitude of the medical profession is such that the federal government must come to the rescue of these millions of helpless ill people whose calls for medical care get little or no response because of the doctor's preference to serve those well able to pay exhorbitant fees.

Make no mistake about it—these and similar charges have been filling the ears (ears not too unwilling to listen) of the American public, from the press, legislative halls, organized groups, radio, and by word of mouth, and much of it is believed.

In view of all this and much more, are you conscious of how little the public has been told of the real picture—of the facts as they exist? Unquestionably the doctors of Virginia, as well as of other states, have a golden opportunity to do two things. First—carry their story to the public—it's an interesting story and the public is anxious for it. Second—get every member of the profession to participate in and actively support pre-payment medical care plans for lower income groups.

Congress will convene in January, 1947. Can we fail to show that our doctors in Virginia are wholeheartedly endeavoring to provide a means whereby every person in Virginia can get medical care? Can we afford to sit idly by and let the public (voters and supporters of our Congressmen) continue to get inaccurate figures, warped surveys, and false impressions, to the end that a plan or system of medical care is set up by the Federal Government, when the institution of such a plan or system would in effect result in a serious deterioration of the quality of medical service?

In this instance the members of the medical profession have a responsibility to the public—that of preserving our private system of medicine and further improving its present high standards.

This issue is being discussed freely, analyzed and weighed by the public. They cannot be left to decide the question without the facts. The public must be informed.

Both of these opportunities are in the hands of our doctors.

Unquestionably, this also essentially represents the views expressed by the presidents, executive secretaries and other officials at their American Medical Association meeting in San Francisco.

HENRY S. JOHNSON, *Director,*
Public Relations and Medical Service

Analysis of Current Legislative Proposals to Nationalize Medicine in the United States

THE above was the title of an address delivered by Marjorie Shearon, Ph.D., Research Analyst, at the Annual Meeting of the National Industrial Conference Board. It is by far the best analysis we have seen on the subject. Every tax payer in the United States should read the full address. Her opening paragraph sets forth the complexities of the question.

"Compulsory sickness insurance is a controversial and little understood device of political action. Proponents of compulsion often vitiate their arguments with emotional appeals, dubious statistics, and offensive red herrings. Opponents, on the other hand, weaken their cause when they hurl unsubstantiated epithets of communism, socialism and State medicine. Unfortunately, this branch of social insurance is so technical that few persons have either time or inclination to study its social and political implications. Yet, if a comprehensive system of Federal compulsory sickness insurance were to be established by Act of Congress every man, woman and child in the United States would be affected by the ensuing social revolution. Thus, regardless of the complexity of the subject, we should examine for our own protection not only the history of this political device but its administrative pattern, its social implications, and its fiscal burdens."

For an historical background one must go back to Bismarck. In 1880 Bismarck needed money for his government, and he needed votes. He turned to his economic advisor who strangely enough was named Wagner. Adolph Wagner was professor of political science at the University of Berlin. Prof. Wagner believed in public ownership of banking, insurance, communication and utilities, and State insurance against sickness incapacity and old age. "He likewise proposed and justified a new scheme of taxation that would not only serve the legitimate purpose of raising revenues but would at the same time fulfill the purpose of what he called 'regulative interference.'" By this he meant regulating (1) the distribution of income and wealth and (2) the purchasing power and living habits of the "lower classes." Wagner called this two sided policy of taxation "Social". In his speech before the Reichstag Bismarck called it "practical Christianity". He induced the Reichstag to approve his new plan for taxing the workers thereby making them shoulder the burden of most of their own poor relief. German sickness insurance was financed by taxes on employers and employees, the workers, until 1934, paying two-thirds of the cost. The Government provided the compulsion and interference. Labor and management footed the bills. When Hitler came into power he dissolved the two leading professional organizations of German doctors and gave exclusive legal status to the sickness insurance doctors. This group was given authority to furnish medical services to insured and uninsured persons and to decide on remuneration. Punishments were devised for physicians and patients: the rights of the individual were abrogated. This *was* done in Germany. It could be done here. These words are not those of a doctor of medicine but of a trained research analyst.

The Bismarck plan of social insurance has been adopted in over thirty countries, generally as a political, fiscal and regulatory device. The schemes for compulsory sickness insurance have in the main followed the original pattern. The destructive characteristics of compulsion and regulatory interference are integral parts of all. Some countries have broader coverage, others more restricted. Great Britain insured only 40 per cent of the population and excluded dependents. Russia, on the other

XUM

hand, covered the entire population and made all physicians salaried servants of the State.

How has this plan worked? I. S. Falk, who is generally credited with being the leader of the movement to establish Federal compulsory sickness insurance in the United States says that the German plan paid too little attention to public health activities. The German insurance practitioners were underpaid and suffered from lay controls. Long and acrimonious wars were fought among the insurance societies, the professions and the insured persons over the questions of "free choice of doctor", "professional freedom from lay control", "adequate professional income", "red tape", "certification for disability", etc., etc. Our research Analyst wonders why, in the light of these facts, all the defects of compulsory sickness insurance should have been written into the successive Wagner-Murray-Dingell bills.

It is argued that the Wagner-Murray-Dingell legislation should be enacted forthwith in order to induce physicians to settle in rural areas. That has not been the experience in Germany. After fifty years of operation "the physicians of Germany are located in excessive proportions in the large cities and in inadequate proportions in rural areas" (Falk).

The claim has been made repeatedly that compulsory sickness insurance does not change the practice of medicine. Patients, it is said, will be free to enter or to remain in the System, physicians will enjoy similar freedom. Patients may freely choose their physicians from among those who have consented to become insurance practitioners and have signed a contract with the Federal Government to abide by the rules and regulations to be issued in Washington. "Is this freedom?" asks our Analyst. "Patients would have about as much freedom as a prisoner in a Federal penitentiary would have if given a choice of working on the rock pile or in the prison laundry. Physicians on their part would be expected to make a blind date with the officials in Washington who would one day promulgate the insurance rules and regulations which would have the force of law." Under the Wagner-Murray-Dingell bill specialists would be available, as a rule, only on the advice of the insurance doctor. Obviously there might be occasions when a patient would demand a specialist and the insurance practitioner in the interests of economy would refuse his consent. In such a case the patient would be compelled to refer his appeal for the services of specialists and consultants to the local medical administrative officer appointed by the Surgeon-General. Anyone who has endeavored to obtain quick action on an appeal to a Government agency in connection, let us say, with an O P A regulation, will appreciate that a critically ill patient would probably be dead before he could obtain a ruling on his "right" to specialists and consultant services. These are words, not of a doctor of medicine, but of an expert on analyzing laws.

It is claimed that the Wagner-Murray-Dingell bill would provide the insured with the best modern medical care. The bill does not so promise. It specifies cheap and limited services—not less than $3.00 or more than $7.00 per day of hospitalization, not in excess of thirty days. These are words, not of a doctor of medicine, but of an expert on analyzing laws.

The degree of "regulative interference" with patients and physicians under the British and German sickness insurance schemes is unbelievable. The insurance system in Germany is policed by medical referees "in respect of the economy and the standards of medical treatment". There is one such referee for every 25,000 insured persons. Among their many duties is to pass on the admission of patients to hospitals. Doctors are under strict control with respect to the prescriptions they may write. The

XUM

standard cost of prescribing per case treated is fixed in the national agreement for the whole country. If, on investigation by a medical referee, it is decided that an insurance doctor has written prescriptions that are deemed too expensive, or has prescribed costly new drugs without sufficient justification, the doctor may be penalized by having the excess amounts deducted from his government reimbursement. These are only a few of the restrictions that hamper physicians under compulsory sickness insurance schemes. The International Labor Office has published an exhaustive volume entitled "Economical Administration of Health Insurance Benefits". There are rules for the conduct of patients, rules for doctors, rules for hospitals, rules for prescribing, etc. In Great Britain every insurance practitioner has on his desk a volume of over 350 pages known as the "Doctor's Bible" which informs him as to what he may or may not do. It is of the utmost importance to realize that the three Wagner-Murray-Dingell bills were not drafted along American lines but are in direct conformity with the international provisions which have been laid down by the International Labor Office, which in turn largely reflect the German viewpoint with respect to the nationalization of medicine and the concentration of power in central governments.

The bills are so drafted with respect to compulsory sickness insurance that the main administrative authority over the lives of all the people in this country would be subtly vested in the Social Security Board. The Surgeon General of the Public Health Service would have to go hat in hand to the Chairman of the Social Security Board for approval of the contracts he would make with hospitals, doctors and dentists. These may seem like unimportant details until it is realized that they are the essence of control. That such legislation would lead to the abolition of the private practice of medicine is freely admitted by the International Labor Office.

It would be impossible for a mere three per cent of payrolls to deliver to the American people the type of best and complete modern medical care that has been promised. We would not have the facilities or the health personnel even within ten years. It would take the full time of all the doctors in the country to spend as little as two hours a year on complete health examinations for everyone in the country. The gap between the promises in connection with the Wagner-Murray-Dingell bills and the possible performance is indicative of a lack of candor on the part of Government experts who withhold from Congress and the public the facts which they have in their possession and which should be made public.

We would like to conclude this already too long editorial with one more quotation from our research Analyst. "One can not have freedom within the framework of compulsory sickness insurance. It is political and bureaucratic double talk to speak of freedom and compulsion as conditions which may be enjoyed simultaneously. Perhaps the people of America wish to seek health under a scheme of nationalized medicine, but I doubt if this is the case. To the extent that they are 'sold' on the idea they have been 'sold' by glittering promises that cannot be fulfilled, and, I might add, they have been sold down the river."

EDITOR'S NOTE. Excerpts from a speech by Dr. Shearon to be published in full by the National Industrial Conference Board.

XUM

SOCIETIES

Fauquier County Medical Society.

At the meeting of this Society in Warrenton on June 13th, the following officers were re-elected: President, Dr. Vaden L. McCullers, Remington; vice-presidents, Dr. Henry L. Townsend, Marshall, and Dr. Walter G. Trow, Warrenton; and secretary-treasurer, Dr. J. Frank Folk, Warrenton. Delegate and alternate to the State meeting in October were also elected.

Following this business, there was a general discussion led by Dr. J. E. Knight and Dr. William R. Pretlow, both of Warrenton, on service to veterans that may be rendered by the local hospital and local physicians.

Dr. M. B. Hiden, chairman of the Program Committee, recommended that each member of the Society make every effort to get as many as possible of his relatives, patients and friends to pay their poll taxes, register and vote, and that each member devote his best efforts to getting the vote out on election days, so that the next time one of our doctors writes a letter to his Congressman or to any other politician, the doctor, through his medical society, will have some votes that will stand behind his letter. This proposition was generally discussed by a large number of the doctors present and all of this discussion was favorable. It was the consensus of opinion that it was the duty of the medical society and the individual doctors to muster all the votes possible to the support of legislation affecting the medical profession and the welfare of their patients. No votes were cast against this plan and it was decided to present the details of the proposed political procedure at the next meeting.

Tazewell County Medical Society.

After routine business, at the April 25th meeting of this Society, Dr. J. W. Witten, a member of the Virginia State Legislature, gave an account of bills affecting the medical profession which were passed at the recent session of Legislature, and Dr. J. M. Peery, who served in the Pacific area during World War II, discussed in interesting detail the methods of treatment used by the United States Army in caring for injured soldiers.

Dr. Mary Elizabeth Johnston reviewed the aims of the Association of American Physicians and Surgeons, Inc., after which the members voted to endorse the efforts of this organization which is striving to defeat the undesirable plans for governmental control of the practice of medicine and surgery, now being considered by Congress. The secretary was instructed to send necessary information to the members of the Society and to urge them to join the Association.

It was decided to have the August meeting at the Tazewell County Country Club and to invite members of the Buchanan-Dickenson Medical Society and the Mercer County (W. Va.) Medical Society to be guests of the Society. Drs. R. Brittain, J. M. Peery and J. J. Porter were appointed as the committee of arrangements for that meeting.

Dr. A. D. Parson and Dr. J. A. Robinson, both of Richlands, are president and secretary of the Society, respectively.

The Lee County Medical Society,

Which suspended meetings during the war while several of its members were in Service, resumed its activities with a meeting on May the 27th and meetings will now be held monthly on the fourth Wednesdays. At the May meeting, the following were elected officers for the ensuing year: President, Dr. George B. Setzler of Pennington Gap; vice-president, Dr. G. C. Sumpter of Rose Hill; and secretary-treasurer, Dr. Thomas S. Ely of Jonesville.

XUM

NEWS

Virginia Beach Meeting.

As the meeting October 14, 15 and 16 is to be the first since a large number of the Medical Society of Virginia members returned from Service, a large attendance is expected. In fact, the Cavalier reported several weeks ago that all rooms had been taken for the meeting except a few parlor suites but that they then had a few rooms available in the new Cavalier Lodge. The management has suggested that those who have not made reservations should communicate direct with one of the following which will be open at that time:

Gay Manor, Ocean Front at 39th
Beach Plaza, Ocean Front near 22nd.
Pinewood, Ocean Front at 9th
The Cavalier is on Ocean Front at 42nd Street.

The attractions of Virginia Beach are so well known to all Virginians, that we can add little to induce you to take a vacation there at that season.

Attention, Golfers!

We have permission to put on a tournament at the Cavalier Golf Club on Sunday, October 13th, the day before the opening session of the Medical Society of Virginia, provided there are a sufficient number of doctors who would care to play. If interested, please communicate as soon as possible with Dr. Clayton W. Eley, 300 Wainwright Building, Norfolk 10, Virginia. In your letter please state your club handicap, as this will greatly facilitate arranging the foursomes.

An Appreciation of the Services of Dr. Moncure and Dr. Stephenson.

In accordance with the recently revised Medical Practice Act, members of the State Board of Medical Examiners who have served as many as two terms cannot succeed themselves. For this reason it became necessary this year for the Governor to make new appointments for the Second and Third Districts. These will fill positions held for many years by Dr. P. St. L. Moncure of Norfolk and Dr. H. U. Stephenson of Richmond. Dr. Moncure has served on the Board continuously since June 1918 and Dr. Stephenson since December of the same year.

The State Board of Medical Examiners at its last meeting in June passed the following resolution in appreciation of the splendid work done by these two doctors through the years:

"We take note of the fact that the terms of office of Dr. P. St. L. Moncure of Norfolk and Dr. H. U. Stephenson of Richmond expire June 30. We take this occasion to express our appreciation of their long years of service. They have been loyal and conscientious servants of the profession and of the public, valuable members of this Board. We feel it proper that recognition of their services be recorded, and therefore, ask our Secretary to transmit this resolution to the VIRGINIA MEDICAL MONTHLY and the public press, requesting its publication."

Appointed Members of the State Board of Medical Examiners.

Governor Tuck has announced the appointment of Dr. George H. Carr, Jr., of Portsmouth, and Dr. Guy W. Horsley of Richmond as members of the State Board of Medical Examiners for the Second and Third Districts, respectively, succeeding Dr. P. St. L. Moncure and Dr. H. U. Stephenson, whose terms of office expired July 1.

American Medical Association.

At the meeting in San Francisco, the first week in July, Dr. Olin West, who retired last April as secretary and general manager of the Association after a service of twenty-four years, was unanimously named presdient-elect. Dr. H. H. Shoulders of Nashville, Tenn., succeeded to the presidency, and Dr. Edward L. Bortz of Philadelphia was selected as president-elect. Dr. George F. Lull, recently appointed to the office of secretary and general manager, was elected to that office for the coming year, and Dr. J. J. Moore of Chicago was re-elected treasurer. Atlantic City was previously selected as the 1947 place of meeting and St. Louis for 1948. New York was tentatively selected for 1949 if suitable space can be had for the meeting.

Dr. James L. Hamner

Of Mannboro has been appointed by Governor Tuck to the State Board of Health for a seven-year term, effective July 1. He succeeds Dr. J. Bolling Jones of Petersburg, resigned.

The Third Refresher Course

For medical veterans of World War II was held by the Department of Medicine of the University of Virginia in Charlottesville from June 3rd to 15th. The lectures, ward rounds and clinics were given by members of the University Medical Faculty and

the evening sessions were devoted to lectures by invited guests. There was an enrollment of 26 for the course. Twenty-four of these were veterans. The veterans attending the course were:

Dr. William R. Watkins, South Boston.
Dr. John C. Hawk, Jr., Charlottesville.
Dr. R. J. Sykes, Durham, N. C.
Dr. Philip C. Whitehead, Chatham.
Dr. Phil W. Smith, Crozet.
Capt. Leonard I. Malis, Coatesville, Penna.
Dr. Forrest Elliott Oglesby, Emporia.
Dr. Lewis F. Somers, Lynchburg.
Dr. E. B. Robertson, Danville.
Dr. James T. O'Neal, Amelia.
Dr. Nevin H. Seitz, Hanover, Penna.
Dr. J. L. Walker, Bowdon, Ga.
Dr. Charles F. Gaylord, Staunton.
Dr. Charles Lupton, Jr., Durham, N. C.
Dr. Charles W. Warren, Upperville.
Dr. W. C. Elliott, Lebanon.
Dr. J. W. Elliott, Lebanon.
Dr. Newton Lancaster, Waynesville, N. C.
Dr. Charles J. Sites, Uppertract, W. Va.
Dr. Thomas Stringfield, Jr., Waynesville, N. C.
Col. A. A. Sparkman, Martin, Tenn.
Dr. Lewis B. Ziv, Portsmouth.
Dr. Brooke B. Mallory, Lexington.
Dr. William W. Zimmerman, Purcellville.

The two civilian physicians were:

Dr. V. W. Quillen, Nickelsville.
Dr. J. H. Yeatman, Fork Union.

This course was the third of four to be given alternately every three months for the next year by the Department of Medicine of the University of Virginia and the School of Medicine of the Medical College of Virginia. The next course will be held in September, 1946, at Richmond.

Dr. William Pembleton,

Recently engaged in the practice of internal medicine in Richmond, is at the Hartford Hospital, Hartford, Conn., where he is taking special work in anesthesiology for about a year.

Dr. Charles H. Dow,

Who returned from medical service with the Air Corps about a year ago, has located in Roanoke where he is connected with the Gill Memorial Eye, Ear and Throat Hospital. Before entering the Service, Dr. Dow was practicing at Chilhowie and, since his return, has been taking a special course in otolaryngology at the Graduate School of Medicine of the University of Pennsylvania.

Dr. Orrin K. Phlegar,

Who has been located in Dayton, Ohio, for nearly two years, has returned to his former home at Bluefield, Va.

Dr. Joseph E. Cox,

Pediatrician of Waynesboro, has accepted a position with the Veterans Administration as a doctor of medicine, senior grade, and has been assigned to the Veterans Hospital at Albuquerque, New Mexico. He left in July for this appointment.

The Southern Psychiatric Association

Will hold its annual sessions at the Jefferson Hotel in Richmond on October 7 and 8. The last meeting of the Association was held in Nashville in 1941, under the presidency of Dr. Arthur J. Schwenkenberg, of Dallas. The present officers of the Association are: Dr. Whitman C. McConnell, St. Petersburg, Florida, President; Dr. James K. Hall, Richmond, President Elect; Dr. Edmund McC. Connelly, New Orleans, Vice-President; Dr. Arthur J. Schwenkenberg, Dallas, and Dr. John S. Hickman, Meridian, Miss., Councillors; and Dr. Newdigate M. Owensby, Atlanta, Georgia, Secretary-Treasurer.

The American College of Physicians

Announces its 28th annual session to be held in Chicago, Ill., April 28-May 2, 1947. Dr. David P. Barr, New York, is President of the College, and will be in charge of the program of General Sessions and Lectures. Dr. LeRoy H. Sloan, Chicago, has been appointed General Chairman, and will be in charge of the program of Hospital Clinics and Panels, as well as local arrangements, entertainment, etc. Mr. Edward R. Loveland, Executive Secretary of the College, 4200 Pine Street, Philadelphia 4, will have charge of the general management of the session and the technical exhibits.

Other medical societies are urged to note these dates in order that conflicts in meeting dates may be avoided for mutual benefit.

Dr. Plecker Retires.

Dr. W. A. Plecker retired on July 1st as Director of Virginia's Vital Statistics Bureau, which he organized in 1912. During his administration the birth of every Virginian under the age of 34 has been recorded in his office. His assistant, Miss Marks, is acting in his place until a director is named. Dr. Plecker contemplated retirement before

XUM

the war but kept at his work during the emergency. He stated that he planned to continue his racial studies in which he has been much interested.

In Civilian Practice Again.

Names of members of the Medical Society of Virginia not previously announced in our pages as being separated from service with the Armed Forces, are:

Dr. Donald L. Arey, Danville.
Dr. Glenn H. Baird, Abingdon (temporarily at Agenda, Kan.)
Dr. Robley D. Bates, Jr., Richmond.
Dr. Julian R. Beckwith, Clifton Forge.
Dr. F. I. Bloise, Richmond.
Dr. Harry Brick, Richmond.
Dr. G. R. Carpenter, Richmond.
Dr. C. C. Chewning, Richmond.
Dr. James J. Clark, Richmond.
Dr. Franklin H. Cohen, Norfolk.
Dr. E. L. Crumpacker, Roanoke (formerly Williamsburg).
Dr. A. C. Davis, Roanoke.
Dr. J. W. Devine, Jr., Lynchburg.
Dr. Burton E. Field, Richmond.
Dr. H. D. Fitzpatrick, Radford.
Dr. W. P. Frazer, Hamilton.
Dr. H. M. Frieden, Norfolk.
Dr. John F. Gayle, Newport News.
Dr. Garrett G. Gooch, III, Roanoke.
Dr. R. H. Harrington, Marion.
Dr. Ivor D. Harris, Charlottesville (now Detroit, Mich.)
Dr. H. R. Hartwell, Bedford.
Dr. Henry A. Hornthal, Washington, D. C.
Dr. H. D. Hoskins, Lynchburg.
Dr. C. E. Jenkins, Alexandria.
Dr. G. Richardson Joyner, Suffolk.
Dr. Arthur Klein, Richmond.
Dr. Theodore Kohn, Richmond.
Dr. M. B. Lamberth, Jr., Richmond.
Dr. E. M. LaPrade, Richmond.
Dr. B. I. Lidman, Norfolk.
Dr. N. S. Lieberman, Portsmouth.
Dr. George W. McCall, Bristol.
Dr. H. C. McCoy, Gordonsville.
Dr. John O. McNeel, Charlottesville.
Dr. John G. McNiel, Manassas.
Dr. M. E. McRae, Richmond.
Dr. S. H. Mirmelstein, Newport News.
Dr. E. Berkeley Neal, Roanoke.
Dr. I. M. Nuckols, Mt. Sidney.
Dr. Leland R. O'Brian, Lynchburg.
Dr. C. G. O'Brien, Appomattox.
Dr. Boyd H. Payne, Staunton.
Dr. J. J. Porter, Appalachia.
Dr. W. O. Porter, Roanoke.
Dr. Guy C. Richardson, Bristol.
Dr. Edward B. Robertson, Danville.
Dr. Thomas Scarlett, Harrisonburg.
Dr. William P. Sellers, Norfolk.
Dr. A. D. Shapiro, Roanoke.
Dr. William L. Sibley, Roanoke.
Dr. George H. Smith, Winchester.
Dr. Harry E. Sutelan, Norfolk.
Dr. James A. Thweatt, Petersburg.
Dr. M. H. Todd, Norfolk.
Dr. James Volpe, Jr., Jonesville (now Yuma, Ariz.).
Dr. J. Franklin Waddill, Norfolk.
Dr. C. W. Warren, Upperville.
Dr. H. B. Webb, Waynesboro.
Dr. M. Richard Whitehill, Norfolk.
Dr. Wm. B. Wilkins, West Palm Beach, Fla. (formerly Alexandria).
Dr. George Zur Williams, Richmond.
Dr. Garland Wolfe, Abingdon.
Dr. William H. Woodson, Newport News.
Dr. Louis B. Ziv, Portsmouth.

Dr. C. Howard Cain,

Who has practiced for some time at Colonial Heights, Petersburg, on July the 1st located at Wakefield, where he has taken over the offices of Dr. T. M. Raines who died in April.

Medical Care for Rural Virginia.

In cooperation with the Virginia Council on Health and Medical Care, Dr. W. E. Garnett, Rural Sociologist, of the Virginia Agricultural Experiment Station connected with the Virginia Polytechnic Institute, has prepared a progress report on Medical Care for Rural Virginia. This work was done at the request of officials of the Federation of Virginia Home Demonstration Clubs for use in a series of local club meetings. The report lists a number of advances made and rural needs still to be met.

Another of the Rural Sociology reports published recently is on The Housing of Virginia Rural Folk.

Dr. Roshier Miller Honored.

Dr. Roshier W. Miller, for twenty-six years a member of the Richmond City School Board, for eighteen of which he was chairman, was honored at a dinner given him by the former and new members of the Board at the Commonwealth Club on June the 25th.

Married.

Dr. Thomas Nelson Page Johns, son of Dr. and Mrs. Frank S. Johns of Richmond, and Miss Helen Cordier of East Hampton, L. I., N. Y., June 29. They are making their home in Baltimore where Dr. Johns is intern in surgery at Johns Hopkins Hospital.

XUM

Dr. P. W. Boyd,

Winchester, surgeon and apple grower. has been elected president of the Shenandoah Apple Blossom Festival for the coming year.

Dr. Funk Resigns.

The State Department of Health has sustained another loss in its personnel by the resignation, effective September 1st, of J. Clarence Funk, Sc.D., after an excellent service for ten years as director of health education. Dr. Funk came to this State from Pennsylvania, where he had served as chief of that State Bureau of Public Health Education.

Dr. Lemuel E. Mayo,

Recently separated from service with the Army Air Forces, announces that he is back in the practice of general and thoracic surgery and diagnostic bronchoscopy, with offices at 509 Professional Building, Portsmouth, and 339 Boush Street, Norfolk.

Richmond Tuberculosis Association.

At the annual meeting of the Association recently, Dr. Emily Gardner was re-elected president for the coming year. Dr. D. D. Talley, Jr., was elected one of the vice-presidents, and Dr. E. L. Kendig, Jr., was named to fill the honorary vice-presidency caused by the death of Mrs. J. K. Bowman.

Mr. Braun Honored at San Francisco Meeting.

At the recent meeting of the American Medical Association in San Francisco, Mr. Will C. Braun, for fifty-four years business and circulation manager for the Association, was tendered a dinner by his co-workers and other friends in appreciation of his splendid work and the cordial relations he had established with many leaders in commercial fields allied to medicine. On this occasion, Mr. Braun was presented with a handsome watch and fishing equipment as a token of appreciation. He had tendered his resignation to take effect at this time.

Full-Time Psychiatrist for State's Penal System.

Dr. Harry Brick, formerly a resident physician at Tucker Sanatorium, Richmond, recently returned from Service as an Army psychiatrist, has been appointed as full-time psychiatrist in the State penal system. To this time, Dr. J. Asa Shield, also of Tucker Sanatorium, has been doing psychiatric work in the penitentiary system on a part-time basis.

Drs. Peterson, Barker and Smith.

Dr. Charles H. Peterson, Dr. Allen Barker and Dr. Charles D. Smith announce their release from the Medical Corps of the Armed Forces and their return to the practice of Radiology in Roanoke.

Dr. Lyle E. Delap,

Formerly of Radford, announces his release from duty with the Army of the United States and his location in Narrows, where he will be engaged in general practice.

American Hearing Society.

On June 16, the members of the American Society for the Hard of Hearing voted to change the name of their organization to American Hearing Society. The Society states this change was made with the idea of placing emphasis on hearing, their wish being to conserve hearing, to stress hearing conservation programs and hearing centers. Better hearing is not their ultimate goal, but the best hearing.

Personnel Changes in State Department of Health.

Dr. T. F. McGough, recently released from medical service with the Army, has been appointed, as of July 10, Health Officer of the Peninsula Health District.

Dr. G. R. Carpenter, recently returned from duty in Austria with the Medical Corps, was appointed, as of July 1, Director of the Bureau of Cancer Control. Prior to his service abroad, Dr. Carpenter was Health Officer of Fairfax County.

Dr. Samuel C. Ingraham, II, recently released from his duties with the Tuberculosis Division of the U. S. Public Health Service, was appointed, as of July 1, Director of the Tuberculosis Out-Patient Service and Crippled Children Bureau.

Improvements in Services at McGuire Veterans Hospital.

Dr. E. M. Ellerson, manager, announces that three new drugs, portable pay station telephones for patients unable to leave their beds and additional equipment for issue to spinal cord injury patients when they go home are some of the improvements in services to veterans that McGuire Veterans Administration Hospital can now offer.

XUM

The three drugs recently released for general medical use and now added to those at McGuire are Folic Acid, member of vitamin B, complex group; Tridione, a compound which has proved effective in treating several forms of epilepsy that resisted drugs formerly used, and Thiouracil, used in treating hyperthyroidism.

The portable pay telephones, called telecarts, consist of the familiar coin-box telephone mounted on a rubber-tired contrivance that looks like a tea wagon. They are plugged into wall outlets.

A hospital bed with an overhead bar, an inner spring mattress and two mattress covers can be issued to spinal cord injury patients when they leave the hospital if doctors determine such items are needed for proper home care and treatment. VA has previously been able to issue wheel chairs, crutches and various sick bed equipment. This new arrangement makes it possible to issue the additional equipment without requesting special authorization in each case.

McGuire is one of the five VA centers for spinal cord cases in this country.

Dr. Norman Sollod,

Recently returned from Service, is completing a six months' course in Internal Medicine at Harvard Medical School, and will return to Richmond this month as a resident in medicine at the Veterans Hospital.

20th Anniversary of Gill Hospital.

On July the 1st, the Staff of the Gill Memorial Eye, Ear and Throat Hospital honored Dr. E. G. Gill, its founder, with a banquet on the occasion of its twentieth anniversary.

Dr. R. Brittain,

After practicing for some years at Jewell Ridge, has located in Tazewell.

National Arthritis Foundation.

The Foundation, to be located in Hot Springs National Park, Arkansas, is to serve as the national center for the study of the causes, treatment and prevention of arthritis and other rheumatic conditions. Announcement has been made of a campaign for $2,500,000 for the construction and equipment of buildings and for scientific personnel, and of the naming of Lionel Barrymore as Chairman of the National Board of Sponsors of the National Arthritis Research Foundation.

Endorsed by medical leaders including Dr. Thomas Parran, Surgeon General of the U. S. Public Health Service, Major General George F. Lull, former Deputy Surgeon General of the Army Service Forces, Dr. Morris Fishbein, Editor of *The Journal of the American Medical Association*, and other eminent scientists, the National Arthritis Research Foundation was started through the efforts of the officers and trustees of the Levi Memorial Hospital Association. This institution, national and non-sectarian, has been devoted since 1914 to the free care of arthritic victims. Since its inception, it has ministered without charge to approximately 185,000 sufferers of rheumatic conditions.

The National Arthritis Research Foundation will embrace the entire field of rheumatic ailments including arthritis, rheumatic fever and kindred diseases. Hot Springs is one of America's best known spas. Its thermal waters, under government control, will be one of the subjects of research in the treatment of these diseases.

Arthritis is the most widespread chronic disease and is regarded as being first in medical, economic and social importance. Rheumatic conditions afflict about 7,000,000 Americans, one person in every 20, and totals more cases than cancer, tuberculosis, diabetes and heart disease combined. Arthritis is also the oldest disease of which science has definite record.

Physicians Assigned to VA Hospitals.

According to a VA announcement, forty-three young physicians who received their medical education under the Army Specialized Training and Navy V-12 programs have been assigned to two Veterans Administration hospitals in Vriginia. These doctors recently completed their internship in civilian hospitals.

Assigned to the Roanoke hospital were 21 from the Army and seven from the Navy, while 12 Army and three Navy doctors were assigned to Kecoughtan. They were part of 107 young medical officers assigned to hospitals in the Richmond VA Branch area.

Dr. Henry M. Snead

Has given up his work in Petersburg and moved to Cumberland County, with his post-office at Columbia.

XUM

Dr. J. T. Showalter,

Christiansburg, of the class of '36, University of Virginia, Department of Medicine, has accepted an appointment for a year at the Lankenau Hospital, Philadelphia, entering upon his duties there on July the 1st.

Dr. Lewis G. Richards, Jr.,

Of Roanoke, is now serving in the U. S. Navy, on the hospital ship, U. S. S. Bountiful, and was at Bikini Atoll for the atom bomb test. Dr. Richards is a graduate of the class of '45, University of Virginia, Department of Medicine, later interning at St. Luke's Hospital, New York City.

Dr. L. E. Wexberg,

Of Washington, has been appointed as consultant psychiatrist, on a part time basis, to the Fairfax Mental Hygiene Clinic.

The National Gastroenterological Association

Announces that Capt. Irving B. Brick, M.C., A.U.S., was the winner of its 1946 Cash Prize Award Contest for the best unpublished manuscript on Gastroenterology on an allied subject.

His subject was "Radiation Effects on the Human Stomach: A Preliminary Report", and the $100.00 check was presented to him at the annual banquet of the Association, at the Hotel Pennsylvania, on June 20th.

Certificates of Merit were also awarded to Dr. Frank L. Apperly, Richmond, Va.; Dr. William Nimeh, Mexico City, Mexico; and Dr. Juan Nasio, Rosario, Argentina. The winning paper, as well as those receiving Certificates of Merit, will be published in the *Review of Gastroenterology* commencing with the September-October 1946 issue.

Color Therapy at VA Hospital.

The buff interior of a ward building at the Roanoke Veterans Administration hospital is taking on a new color—indeed, several colors. And this more pleasant effect is due to the fact that the hospital is developing color therapy—the use of the energy in colors to aid the recovery of the physically or mentally sick—as a part of its general treatment program.

Colors of the right kind and in proper combinations exert a profound influence upon the brain and nervous system of patients, explained Dr. Peter A. Peffer, hospital manager, pointing out that color not only appeals to the eye but has a definite effect upon the mental and physical state. He said the use of color dynamics as it relates to color therapy is a revolutionary change toward color in a hospital which only a few years ago was considered unsound, adding that it is now generally agreed that the atmosphere within a hospital must be made colorful to aid the recovery of the sick.

Basic color tones being applied to the interior of the ward building at the Roanoke hospital are rose tan, stratosphere gray, eye rest green, suntone, cascade blue and bone white.

Noted British Editor Joins Board of Quarterly Review of Obstetrics and Gynecology.

The Washington Institute of Medicine announces the addition to the already notable editorial board of the Quarterly Review of Obstetrics and Gynecology of Professor James Young, D.S.O., M.D., F.R.C.S.Ed., F.R.C.O.G., London, England, internationally known both for his clinical achievements and for his authoritative editorship of "The British Journal of Obstetrics and Gynecology".

Many readers of the MONTHLY will recall Dr. Young's visit to Virginia in 1935, when he delivered the Joseph Price Oration before the American Association of Obstetricians, Gynecologists and Abdominal Surgeons. At that time he had just taken charge of the Department of Obstetrics and Gynecology of the newly established Post-Graduate School of Medicine of the University of London at Hammersmith and he was especially interested in visiting the University of Virginia, the Medical College of Virginia, and Duke University.

An Appointment in Pediatrics

Is available immediately at Raiford Clinic, Franklin, Virginia. Address the Administrator, Raiford Memorial Hospital, Franklin, for further details. (*Adv.*)

XUM

Established Hospital for Lease.

A Sanitorium for nervous, mental, alcoholic and drug cases, doing an excellent business, to a reputable physician or medical group. Dr. E. W. Stokes, 923 Cherokee Road, Louisville 4, Kentucky. (*Adv.*)

For Sale

GE X-ray, Model 1775; 30 ma; 85 KVP, table with Bucky; in excellent working condition. James P. King, M. D., Radford, Virginia. (*Adv.*)

An Appointment in E. E. N. and T.

Available October 1, 1946, at Raiford Clinic, Franklin, Virginia. Address the Administrator, Raiford Memorial Hospital, Franklin, for details. (*Adv.*)

Positions Open.

There are two positions open for Industrial Practice on the Medical Staff of the Clinchfield Coal Corporation, Dante, Va. Phone collect, W. C. Elliott, M.D., Physician in Charge. (*Adv.*)

OBITUARIES

Dr. Thomas Bascon Ely,

Prominent Lee County physician, died at his home in Jonesville, May 6, after having been in bad health for several years and confined to his home for a year. He was a native of Lee County and sixty-four years of age. After attending Emory and Henry College, he studied medicine at the Medical College of Virginia from which he graduated in 1909. Upon completing an internship at Sarah Leigh Hospital in Norfolk, he located for practice at Jonesville. He was a member of his local, State and several other medical organizations, and was also an Odd Fellow, a Royal Arch Mason, and a member of the local Lions Club. In 1937 he was elected to the General Assembly of Virginia and served during the session beginning in 1938. Dr. Ely was medical officer for the local draft board in both World War I and II and took a keen interest in community affairs. He is survived by his wife, a son, Dr. Thomas S. Ely, grandson, two sisters and a brother.

Dr. Thomas Sheppard Richardson,

Retired physician of Waynesboro, died in Marlinton, W. Va., July the 6th, at the age of seventy-seven, and his burial was in the family plot in Bath County. After attending the Polytechnic Institute and Shenandoah Normal School, Dr. Richardson studied medicine at the former University College of Medicine, Richmond, getting his diploma in 1899. He went to Waynesboro that year and had a large practice in that community for more than forty years. He was school physician to Fairfax Hall for many years, and had served on the town council. He had been a member of the Medical Society of Virginia since 1900. His wife, and several brothers and sisters survive him.

Dr. Alexander L. Martin, Jr.,

Richmond, died on July the 17th after a long illness. He was forty-three years of age and a graduate of the Medical College of Virginia in the class of '28. Since then he had practiced in Richmond. He was a member of the Medical Society of Virginia, a thirty-second degree Mason, and a member of the Scottish Rite. His mother and a son survive him.

Dr. Homer E. Clarke

Died at his home at Massies Mill on May 31st, at the age of seventy-seven. After graduating from Miller Manual Training School, he attended the University of Maryland, Baltimore, from which he received his medical degree in 1901. Dr. Clarke practiced in Flint, Michigan, returning to Virginia upon retirement. He was a member of the Medical Society of Virginia. His wife and two daughters survive him.

William Harman Surber,

A member of the Medical Department of D. Appleton-Century Company for seventeen years and its Editor since 1939, died suddenly of a heart attack on July 16. He was 55 years of age. Mr. Surber, a native of Staunton, entered the publishing field with the Michie Publishing Company of Charlottesville, and shortly thereafter established his own firm, the Surber Publishing Company, with headquarters in Charlottesville. When this was wiped out by fire in 1929, he joined the staff of what was then D. Appleton & Company, and had become one of Appleton-Century's oldest and most valued staff members.